

## NEW BOOKLETS AND LEAFLETS

Direct Advertising of manufacturers received recently.

### Arcade

Arcade refrigerator hardware is described in a 48 page catalog received from the Arcade Manufacturing Co., Freeport, Illinois. This company has manufactured hardware for domestic refrigerators for the past 25 years and in 1926 took over the line of commercial refrigerator hardware made by the Sieber Products Mfg. Co., St. Louis, Mo. Both lines are illustrated in this catalog.

### Bohn

An envelope containing samples of Bohn refrigerator advertising has been received from the Bohn Refrigerator Co., St. Paul, Minn. The selection of material offered to dealers includes a number of catalogs showing the various models available, window display cards, a direct mail campaign, newspaper advertising and a number of envelope stuffers to be handed out either in the dealer's store or included with the direct mail letters.

### Copeland

A four page folder has been received from Copeland Sales Co., 630 Lyncast, Detroit, Mich., showing Copeland condensing units and cooling coils for multiple installation. A full page diagram illustrates the method of hooking up these units in a multiple installation system.

An envelope stuffer has also been received from Copeland illustrating in colors five models for small homes and apartments. A small booklet covers Copeland electric refrigeration in general and contains colored illustrations of two Copeland Deluxe models.

### Frick

Bulletin No. 148-A featured by the Frick Company, Waynesboro, Pa., illustrates eight different models of Frick refrigerating machinery and shows a number of photographs of actual installations of the equipment manufactured by this company. Bulletin No. 170-B describes and illustrates the Frick-Simplex scoring machines and ice venders. Bulletins No. 173-A is a small leaflet showing the use of the Frick-Simplex auto ice clips designed for the use of cash and carry ice customers.

### Hodgkins

The M. E. auxiliary control for household electric refrigerators is presented in a leaflet received from Hodgkins Engineering Co., 180 Milk St., Boston, Mass. The M E control permits the customer to adjust the temperature as desired without interfering with the automatic operation of the regular temperature control furnished with the installation.

### Ice-O-Lator

The National Refrigerating Co., 125 Munson St., New Haven, Conn., has sent in a copy of their sales manual on Ice-O-Lator absorption type refrigerators. The manual covers the various questions which are likely to be brought up by prospective customers and gives an answer to each. In addition to this, the book contains diagrams of the Ice-O-Lator machine and also charts comparing this unit with those of other manufacturers.

### McCray

A catalog showing McCray commercial refrigerators, Frigidaire equipped, has been received from the McCray Refrigerator Sales Corp., Kendallville, Ind. The various commercial refrigerators available are illustrated and accompanying photographs show the Frigidaire cooling and compressing unit which will adequately take care of the refrigeration of the case illustrated. Specifications cover not only the cabinet but also the compressor to be used with it.

### Stow

From the Stow Manufacturing Co., Binghamton, N. Y., comes a folder, illustrating various possible applications of the Stow flexible shaft assembly.

### Yale

Hand traveling cranes manufactured by the Yale & Towne Mfg. Co., Stamford, Conn., are illustrated and described in a small folder received from the manufacturer.

## NEW G. E. DEALERS IN MILWAUKEE

A. Schiff, vice-president and general manager of the Electric Refrigerator Co., distributors of General Electric Refrigerators in Milwaukee, announces the appointment of the following local concerns as sub-dealers in Milwaukee:

East Side Radio Service,  
E. J. Kraus,  
Western Ice & Coal Co.,  
Tank & Son,  
Tower Radio & Electric Co.,  
J. J. Jones Co.,  
Rayjo Radio Dealer,  
Wachs Sales Co.

Over fifty General Electric dealers in the Milwaukee territory attended an all day meeting at the Hotel Schroeder, Milwaukee, April 12. Among the speakers were: W. J. Daily and J. Donovan, of the Cleveland office; William H. Taylor, direct representative of the General Electric Co., of Minneapolis; and D. E. Breckenridge, district representative, were present.

## STATEMENT OF OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912.

OF ELECTRIC REFRIGERATION NEWS, published every two weeks at Detroit, Michigan, for April 1, 1928.

STATE OF MICHIGAN,  
COUNTY OF WAYNE,  
ss.

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared George N. Congdon, who, having been duly sworn according to law, deposes and says that he is the Business Manager of the ELECTRIC REFRIGERATION NEWS and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse side of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, Business News Publishing Company, 554 Maccaabees Building, Detroit, Mich.  
Editor, Francis M. Cockrell, 18090 Wildemere, Detroit, Michigan.

Managing Editor, Hugh J. Moore, 640 Delaware, Detroit, Michigan.  
Business Manager, George N. Congdon, 11 Farrand Park, Detroit, Michigan.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

Business News Publishing Company, 554 Maccaabees Building, Detroit, Mich.  
Francis M. Cockrell, 18090 Wildemere, Detroit, Mich.  
James M. Evans, 818 W. Hancock, Detroit, Mich.  
H. A. DeLashmuth, Belcrest Apts., Detroit, Mich.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholders or security holder appears upon the books of the company as trustee or in other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is: (This information is required from daily publications only.)

GEORGE N. CONGDON,  
(Signature of Business Manager).

Sworn to and subscribed before me this 7th day of April, 1928.

ANNA SACHS.  
(My Commission expires August 27, 1930.)

Subscribe to the News.  
Use the coupon below:

## Subscription Order

ELECTRIC REFRIGERATION NEWS,  
554 MACCAABES BUILDING, DETROIT, MICH.

Please enter my subscription to Electric Refrigeration News.

United States and Possessions:

☐ \$1.50 per year. ☐ Three years for \$3.00.

All other Countries:

☐ \$1.75 per year. ☐ Two years for \$3.00.

I am enclosing payment in the form of

☐ Check ☐ P. O. Order ☐ Cash

Name

Street Address

City and State

Remarks:

## "PLEASE CHANGE MY ADDRESS"

Recent movements of Electric Refrigeration News subscribers as indicated by requests for changes in mailing addresses.

Blasing, H. A., from 802 15th Ave., Middleton, Ohio, to 1917 Manchester Ave., Middleton, Ohio.

Bolton, Glen, from R. D. No. 1, Batavia, N. Y., to 20 Clifton Ave., Batavia, N. Y.

Carroll, Harry A., from 225 West 34th St., New York, N. Y., to 49 West 34th St., Room 1202, New York, N. Y.

Clark, Louis, from 126 N. Breed St., Breed Apts., Los Angeles, Calif., to 114 N. Breed St., Breed Apts., Los Angeles, Calif.

Clark, W. J., from 1218 Flatbush Ave., Brooklyn, N. Y., to 3018 Farragut Rd., Brooklyn, N. Y.

Colin Campbell Co., from 2050 Graybar Bldg., New York, N. Y., to 629 Francis St., Pelham Manor, N. Y.

Cramer, Howard C., from 1513 Superior St., Cleveland, Ohio, to 2336 Prospect Place, Cleveland, Ohio.

Crites, O. E., from 1007 South 5th St., Leavenworth, Kansas, to 2736 Charlotte, Kansas, Mo.

Edwards, Wm. J., from 12639 Wilfred Ave., Detroit, Mich., to 6031 Lakepointe Ave., Detroit, Mich.

Ender, Carl G., from 302 Chestnut St., Harrisburg, Pa., to 2602 Derry St., Harrisburg, Pa.

Good Housekeeping Institute, from 105 West 39th St., New York, N. Y., to International Magazine Bldg., 57th St. at 8th Ave., New York, N. Y.

Grover, Lewis E., from 206 Linn St., Boone, Iowa, to 1827 Tama, Boone, Iowa.

Guinther, Geo., from 1518 14 1/2 St., Rock Island, Ill., to 608 39th St., Rock Island, Ill.

Haney, A. A., from Box 464, Fort Worth, Texas, to 200 S. Jennings, Fort Worth, Texas.

Hawley, J. H., from 813-815 Grand Central, Tampa, Fla., to Kelvinator Dow Co., Lakeland, Florida.

Haynes, M. G., from 1524 W. Ingraham St., Los Angeles, Calif., to 5755 Landgron St., Oakland, Calif.

Hills, Lawrence R., from 39 W. 45th St., New York, N. Y., to 681 Ocean Ave., Brooklyn, New York.

Himmelsbach, J. B., from 329 S. Adler, Portland, Oregon, to 181 "A" Broadway, Portland, Oregon.

Hoff, Earl B., from 3373 Delwood Rd., Cleveland, Ohio, to 3373 Delwood Rd., Cleveland Heights, Ohio.

Jones, Kenneth, from 1459 N. Catalina, Pasadena, Calif., to 85 W. Dakota, Pasadena, Calif.

Johnson, A. C., from Salisbury, Md., to Paradise Farm, Maryland.

Johnson, William B., from 434 E. 66th St., New York, N. Y., to 55-02 32nd St., Woodside, Long Island, N. Y.

Kaestner, O., from 1901 West 7th St., Los Angeles, Calif., to 2296 Baxter St., Los Angeles, Calif.

Landgraf, T. H., from 64 N. 4th St., Aurora, Ill., to 547 Douglas Ave., Aurora, Ill.

Murray, S. H., from 4272 Hylan Blvd., Great Kills, Staten Island, N. Y., to 440-2 95th St., New York, N. Y.

Olson, C. F., from 6551 San Pablo Ave., Oakland, Calif., to 1028 College Ave., Alameda, Calif.

Purcell, R. C., from 1819 Dewey Ave., Rochester, N. Y., to 90 Bakerdale, Rd., Rochester, New York.

Robertson, Wm., from 37 Laconia St., Elmhurst, L. I., N. Y., to 239 Bainbridge St., Brooklyn, N. Y.

Rochester Oil Heating & Refrigerating Co., from 227 East Ave., Rochester, N. Y., to 422 Main East, Rochester, N. Y.

Roesch, C. E., from 1990 Martindale Rd., Cleveland Heights, Ohio, to 2176 Westminster Rd., Cleveland Heights, Ohio.

Scott, F. J., from P. O. Box 264, Bartlesville, Okla., to R. 4 Box 117 "B", Tulsa, Oklahoma.

Scutan Co., Inc., from 36 N. 15th St., Brooklyn, N. Y., to 342 Madison Ave., New York, N. Y.

Smethills, J. A., from 855 W. Washington Blvd., Chicago, Ill., to 3791 Cortland St., Chicago, Ill.

Tippett, William M., from 510 N. Dearborn St., Chicago, Ill., to 829 S. Artrus St., Los Angeles, Calif.

Watson, F. S., from 38 Batavia, River Rouge, Mich., to 31 Victoria, River Rouge, Mich.

Whiting, Fred D., from 2750 Vicksburg, Detroit, Mich., to 3741 Coolingwood, Apt. 203, Detroit, Mich.

### J. E. O'Brien Joins Savage.

Mr. J. E. O'Brien, for ten years in the wholesale and retail ice cream and confectionery business, with headquarters in Omaha, Nebraska, has become associated with the Savage Arms Corporation, Refrigeration Division.

Mr. O'Brien will have charge of sales of the Savage Mercury Ice Cream Cabinet in Philadelphia, New Jersey, and Metropolitan New York.

Prior to joining Savage he was Philadelphia Branch Manager of the Nizer Corporation.

### Corrections

In an article which appeared in the March 28 issue of ELECTRIC REFRIGERATION NEWS headed, "Lipman Announces Unit with 10 Horse Power Motor," it was stated that the General Refrigeration Company, Beloit, Wis., manufactures compressors in sizes ranging from a capacity of one to twenty tons. The manufacturer advises us that actually they are building five models that have a capacity smaller than one ton, these ranging upward from 1/4 to 3/4 tons, thus covering the requirements of the smaller commercial establishments.

In the April 11 issue of ELECTRIC REFRIGERATION NEWS under the heading "Serval Lacquers Applied in Layers by Special Process," it was stated that the interior and exterior of Serval cabinets are finished in lacquer. This is incorrect, since Serval builds nothing but steel cabinets with porcelain one piece liners, cork board insulation and exterior lacquer finish with optional colors.

## CONVENTION DATES

American Association of Engineers, Hotel Husman, El Paso, Tex., June 4-6, M. E. McIver, Secy., 63 E. Adams St., Chicago, Ill.

American Association of Railroad Supts., Annual Meeting, Hotel Peabody, Memphis, Tenn., June 12-15, J. Rothchild, Secy., Union Station, St. Louis, Mo.

American Institute of Chemical Engineers and British Institution of Chemical Engineers, Niagara Falls, Aug. 23-26, H. C. Parmelee, Secy., 10th Ave. at 36th St., New York City, N. Y.

American Institute of Electrical Engineers, New Haven Regional Meeting, New Haven, Conn., May 9-11, F. L. Hutchinson, Secy., 31 W. 39th St., New York City, N. Y.

Summer Convention, Denver, Colo., June 25-29, Pacific Coast Convention, Spokane, Wash., Aug. 28-31.

American Institute of Refrigeration, Annual Meeting, Washington, D. C., May 10-11, J. F. Nickerson, Secy., 5707 West Lake St., Chicago, Ill.

American Railway Association, Mechanical Division, Atlantic City, N. J., June 20-27, V. R. Hawthorne, Secy., 431 So. Dearborn St., Chicago, Ill.

American Society for Testing Materials, Annual Meeting, Chalfont-Haddon Hall Hotels, Atlantic City, N. J., June 25-29, C. L. Warwick, Secy., 1315 Spruce St., Philadelphia, Pa.

American Society of Agricultural Engineers, Annual Meeting, Washington, D. C., June 19-22, Raymond Olney, Secy., St. Joseph, Mich.

American Society of Civil Engineers, Annual Meeting, Buffalo, N. Y., July 18-20, G. T. Seabury, Secy., 33 W. 39th St., New York City, N. Y.

American Society of Heating & Ventilating Engineers, Semi-Annual Meeting, West Baden Springs, Ind., June 26-29, A. B. Hutchinson, Secy., 29 W. 39th St., New York City, N. Y.

American Society of Mechanical Engineers, Spring Meeting, Pittsburgh, Pa., May 14-17, C. W. Rice, Secy., 29 W. 39th St., New York City, N. Y.

National Meeting, Oil & Gas Power, State College, Pa., June 14-16.

National Meeting, Aeronautics & Wood Industries, Detroit, Mich., June 14-16.

Regional Meeting, St. Paul-Minneapolis, Minn., Aug. 27-29.

American Society of Refrigerating Engineers, Detroit, Mich., June 4-7, David L. Fiske, Secy., 37 W. 39th St., New York City, N. Y.

Arkansas Utilities Association, Arlington Hotel, Hot Springs National Park, Ark., May 14-16, R. I. Brown, Secy., Arkansas Power & Light Co., Little Rock, Ark.

Artistic Lighting Equipment Association, Annual Meeting, Hotel Sherman, Chicago, Ill., June 11-16, G. P. Rogers, Manager, 420 Lexington Ave., New York City, N. Y. (exhibits).

Association of Electragists, International, Hotel Stevens, Chicago, Ill., Aug. 6-11, L. W. Davis, Secy., 15 W. 37th St., New York City, N. Y. (exhibits).

Association of Iron & Steel Electrical Engineers, Hotel Stevens, Chicago, Ill., June 25-29, John F. Kelly, Empire Bldg., Pittsburgh, Pa.

Association of Municipal Electrical Utilities of Ontario, Clifton Hotel, Niagara Falls, Ontario, Can., June 13-15, S. R. A. Clement, Secy., 190 University Ave., Toronto 2, Ont., Canada.

Association of Scientific Apparatus Makers of U. S., Atlantic City, N. J., May 3-5, J. M. Roberts, Secy., 460 E. Ohio St., Chicago, Ill.

Camp Co-operation VIII, Association Island, Henderson Harbor, N. Y., Aug. 2-7, The Society for Electrical Development, Inc., 420 Lexington Ave., New York City, N. Y.

Canadian Electric Railway Association, Annual Meeting, Toronto, Ontario, Can., June 6-8, Eustace Smith, Jr., Secy., 35 Yonge St., Toronto, Ontario, Can., (exhibits).

Canadian Electrical Association, "S. S. Riche-lieu" from Montreal at Saguenay and return, June 20-23, H. M. Lyster, Secy., Room 712, Power Bldg., Montreal, Quebec, Canada.

Central Electric Railway Association, Cedar Point, Ohio, June 28-29, L. E. Earlywine, Secy., 308 Traction Terminal Bldg., Indianapolis, Ind.

Direct Mail Advertising Association, All Western Convention, San Francisco, Calif., May 2-4, Frank L. Pierce, Secy., 431 Howard St., Detroit, Mich.

Electrical Supply Jobbers' Association, Annual Meeting, Hot Springs, Va., June 4-8, E. Donald Tolles, Secy., 165 Broadway, New York City, N. Y.

National Electric Light Association, Annual Meeting, Million Dollar Pier, Atlantic City, N. J., June 4-8, Paul S. Clapp, Managing Director, 420 Lexington Ave., New York City, N. Y.

East Central Division, "The Breakers," Cedar Point, O., July 10-13, D. L. Gaskill, Secy., Greenville Elec. Lt. & Pr. Co., Greenville, Ohio.

Michigan Section, Mackinac Island, Herbert Silverster, Secy., Edison Bldg., Ann Arbor, Mich.

North Central Division, Breezy Point, Minn., June 15-16, John W. Lapham, Secy., 803 Plymouth Bldg., Minneapolis, Minn.

Middle West Division, St. Louis, Mo., May 9-14, Horace M. Davis, Secy., 1519 O Street, Lincoln, Neb.

Northwest Division, Portland, Oregon, June 19-22, J. C. Plankinton, Secy., Northwestern Elec. Co., Portland, Ore.

Pacific Coast Division, Hotel Huntington, Pasadena, Calif., June 12-15, Samuel H. Taylor, Secy., 447 Sutter St., San Francisco, Calif.

National Electrical Credit Association, Annual Meeting, Boston, Mass., July 16-17, F. P. Vose, Secy., 1008 Marquette Bldg., Chicago.

National Electrical Manufacturers Association, Annual Meeting, Hot Springs, Va., June 11-15, A. E. Waller, Managing Director, 420 Lexington Ave., New York City, N. Y.

Pacific Coast Division, Los Angeles, June 12-15.

Policies Division, Association Island, July 29-Aug. 1.

National Fire Protection Association, Atlantic City, N. J., May 7-10, F. H. Wentworth, Secy., 40 Central St., Boston, Mass.

National Industrial Conference Board, Inc., Annual Meeting, Hotel Astor, New York City, N. Y., May 17, James M. Robertson, Secy., 247 Park Ave., New York City, N. Y.

Ohio State Association of Stationary Engineers, Columbus, Ohio, June 21-23, T. S. Garrett, Secy., 2622 Second St., Dayton, O., (exhibits).

Pacific Coast Advertising Convention, Honolulu, Hawaii, June 11-15, W. P. Strandborg, Secy., 329 Alder St., Portland, Ore.

Radio Manufacturers Association, Hotel Stevens, Chicago, June 11-15, M. F. Flanagan, Secy., 32 W. Randolph St., Chicago, Ill. (exhibits).

Society of Automotive Engineers, Quebec, Canada, June 26-29, V. Delchamps, 29 W. 39th St., New York City, N. Y.

Westinghouse Agent-Jobbers Association, The Homestead, Hot Springs, Va., May 28-June 2, Karr Parker, Secy., Buffalo, N. Y.

## THE CONDENSER

### A CLASSIFIED COLUMN OF OPPORTUNITY

REPLIES to box number advertisements should be addressed to Electric Refrigeration News, 554 Maccaabees' Bldg., Detroit, Mich.

ADVERTISING RATES—this column only:

POSITIONS WANTED (special rate if paid in advance): 50 words or less, one insertion, \$2.00, additional words 4 cents each. Three insertions, \$5.00.

POSITIONS AVAILABLE. For Sale, Business Opportunities, and all other classifications (special rate, if paid in advance): 50 words or less, one insertion, \$3.00, three insertions \$8.00, additional words 5 cents each.

LINE RATE (open account): 50 cents per line.

### POSITIONS AVAILABLE

Would like to get in touch with a refrigerating engineer to complete an idea on electric refrigeration. Box No. 68.

Service man thoroughly experienced in commercial and multiple hook-up installations. In reply, state present and past employers, type of work done and salary expected. Box No. 69.

We are now manufacturing gas ranges and are anxious to add electric refrigerators for domestic use to our line. Are therefore looking for high class man capable of handling, designing, manufacturing and selling on a profit sharing basis. No money required. O'Keefe & Merritt Co., 2700 Mines Avenue, Los Angeles, Calif.

### POSITIONS WANTED

#### ENGINEERING EXECUTIVE

connected with electric refrigeration for ten years, desires connection with responsible manufacturer in temporary or permanent capacity as consulting or chief engineer. Capable of taking complete charge of engineering and manufacturing. Inventor and owner of widely used patents. Well acquainted with patent situation. Box 52.

Kelvinator-Nizer sales executive, now employed as sales manager, desires new connection with a well financed firm which will give full co-operation. Knowledge of American and Canadian business methods. Prefer Kelvinator-Nizer connection but have working knowledge of other machines. No particular preference as to location. Box No. 71.

#### ENGINEERING EXECUTIVES

Two Engineers, who have worked together for five years, Designing—Testing—and Experimenting with Electric Refrigeration, desire connection with responsible manufacturer—in middle west preferably—who desires to start, or who have started in this line of work and wants to put a real machine on the market. Have been instrumental in putting one of the most dependable, quietest and best known units in the field on the market. Excellent References. Box 74.

### Refrigeration Service Co., Inc.

#### SERVICE SPECIALISTS

Maintenance, Installations, Alterations, Repairs

New York City

Telephone: Chickerling 0460

Office and Works Warehouse



# ELECTRIC REFRIGERATION NEWS

The business newspaper of the electric refrigeration industry

VOL. 2, No. 18, SERIAL No. 42

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DETROIT, MICHIGAN, MAY 9, 1928

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1927, at the Post Office, Detroit, Michigan.

PRICE TEN CENTS

## PLAN BIG PROGRAM FOR 15TH WESTERN MEETING OF A.S.R.E.

Detroit Section Will Be Hosts at  
Spring Session June 4-7

Detailed plans for the Fifteenth Western meeting of the American Society of Refrigerating Engineers to be held in Detroit, Michigan, June 4-7, at the Statler Hotel, are practically completed.

The four-day meeting combining technical sessions with a generous entertainment program will, it is planned, break all records for attendance.

Plans are being made for a party of delegates and their wives from New York, Philadelphia and Buffalo, which will make the trip to Detroit via Niagara Falls, going from Buffalo to Detroit by boat. A second party will be arranged in Chicago.

One of the high spots in the program will be the banquet dinner dance on Wednesday evening. Edgar A. Guest, author of verses, well known to all, and Edward S. Evans, holder of the world's globe circling speed record and a director of Universal Cooler Corporation, Detroit, will give addresses. Music will be supplied by Joel Murphy of Toledo and his "Ice House Quartette." The committees in charge of the various activities are:

Entertainment—Glen Muffly, Patterson Farmer.  
Ladies entertainment—Mrs. C. C. Spreen.  
Hotels—George B. Bright, A. D. McLay.  
Finance—C. C. Spreen, George W. Mason.  
Transportation—Theodore H. Huettnerman, F. J. Mueller.  
Publicity—F. M. Cockrell, D. G. Ellis.

The program, in which minor changes may be made, appears as follows:

### Monday, June 4

10:00 A. M.—Council meeting; Registration; Committee meetings.  
12:00 M.—Council; Author luncheon.  
2:00 P. M.—Opening session—G. B. Bright, chairman, Business program—technical committee reports, Research division—papers, A. J. Wood, chairman, Ladies: reception or tour.  
7:30 P. M.—Detroit Section meeting—Patterson Farmer, chairman.

### Tuesday, June 5

10:00 A. M.—Refrigeration applications division; Technical session, S. C. Bloom, chairman.  
2:00 P. M.—Domestic refrigeration division; Technical session, A. D. McLay, chairman.  
3:00 P. M.—Ladies' bridge tournament.  
7:00 P. M.—Ladies' theatre party; Conference on standards.

### Wednesday, June 6

10:00 A. M.—Refrigerating machinery division; Technical session, W. O. Whitney, chairman.  
1:30 P. M.—Inspection tour of Ford River Rouge plant and Ford Airport.  
7:00 P. M.—Spring banquet and dinner dance.

### Thursday, June 7

11:00 A. M.—Refrigeration division; Technical session, C. H. Belshaw, chairman.  
1:30 P. M.—Inspection tour of Kelvinator plant, Consumers Ice plant and other manufacturing centers.



George W. Mason

## G. W. MASON ELECTED COPELAND PRESIDENT

George W. Mason has been elected president of Copeland Products, Inc., succeeding William Robert Wilson, who becomes chairman of the board. Announcing the action of the directors, Mr. Wilson, who is also president of the Murray Corp. of America, said:

"Since Mr. Mason became vice-president and general manager of Copeland Products, Inc., March, 1926, growth of the company's business has been little short of phenomenal. The Copeland line has been broadened and the product improved while manufacturing operations have been put on a basis of efficiency which cut the cost of production nearly in half. In a little more than two years Copeland sales outlets have increased over 500 per cent. Shipments in 1926 were about 10 times the output of the year preceding Mr. Mason's coming with us. In 1927 they increased 40 per cent. During the first quarter of 1928 an increase of 45 per cent over the same period of 1927 was shown and indications are favorable for a similar increase in the second quarter."

Before joining Copeland Products, Inc., Mr. Mason was works manager for the Chrysler Motor Corp.

## C. W. MATHESON TO DIRECT SALES OF NEW DE SOTA CAR

C. W. Matheson, former director of sales of Kelvinator Corp., is announced as vice-president in charge of sales of the recently organized De Sota Motor Corp., a division of Chrysler Corp., which will build a car not in competition with any of the present four Chrysler lines.

## Refrigeration Manufacturers Council Organized at Meeting Called by N. E. M. A. in Detroit Today

Constitution and By Laws Adopted to Take Effect When Signed by Ten  
Companies Making Complete Refrigeration Systems

## GEORGIA POWER CO. SETS \$500,000 GOAL FOR SPRING DRIVE

General Electric and Kelvinator  
Machines to be Featured

With the successful half a million dollar electric refrigerator campaign of 1927 in back of it, the Georgia Power Co., Atlanta, Ga., launches out on a similar campaign again with a quota of \$500,000 worth of electric refrigerators to be sold between May 1 and June 30, 1928. In this campaign, General Electric refrigerators will be featured for household and Kelvinator for commercial applications.

The campaign is being conducted as an airplane race around the world, starting in Atlanta, and ending in Atlanta. Each district office is represented by an airplane in the race and the daily progress of each plane is charted in the district offices on a large map.

The opening of the campaign on May 1 was announced to the various cities in the territory of the Georgia Power Co. by airplane which flew over and dropped General Electric advertising literature. Newspaper advertising to the extent of 20,992 column inches will be used during the campaign, accompanied by direct mail and special window displays.

## Woodbridge Will Make Short European Trip

C. K. Woodbridge, president of Kelvinator Corp., and also president of the International Advertising Association announced at the annual meeting of the third district of the Association in Greenboro, N. C., April 23, that he has accepted an invitation to go to Europe to assist in the development of the constitution and plan of the organization of the Continental Advertising Association in Paris, May 21.

RESPONDING to an invitation issued by A. E. Waller, managing director of the National Electrical Manufacturers Association, thirty-one representatives of companies manufacturing electric refrigeration equipment or companies interested in the development of the industry, met at the Detroit Athletic Club, Detroit, Michigan, Wednesday, May 9, in an all-day session at which action was taken to form an industry association. After a detailed presentation by Mr. Waller of the facilities offered by the National Electrical Manufacturers Association and the advantages of organizing as a section, the following resolutions were adopted:

Resolved, that we hereby declare ourselves associated in a Refrigeration Manufacturers Council, to become a permanently organized group as soon as possible.

Resolved, that it is the sense of the meeting that we tentatively endorse the proposal to become a Division of the National Electrical Manufacturers Association, pending preliminary negotiations and a decision as to whether we may be acceptable to the National Electrical Manufacturers Association as a Division.

Following a consideration of the problems confronting the refrigeration industry and the need for personal acquaintanceship and mutual understanding between the executives regarding many matters of common

## CALIFORNIA UNIVERSITY WILL GIVE 18 WEEKS REFRIGERATION COURSE

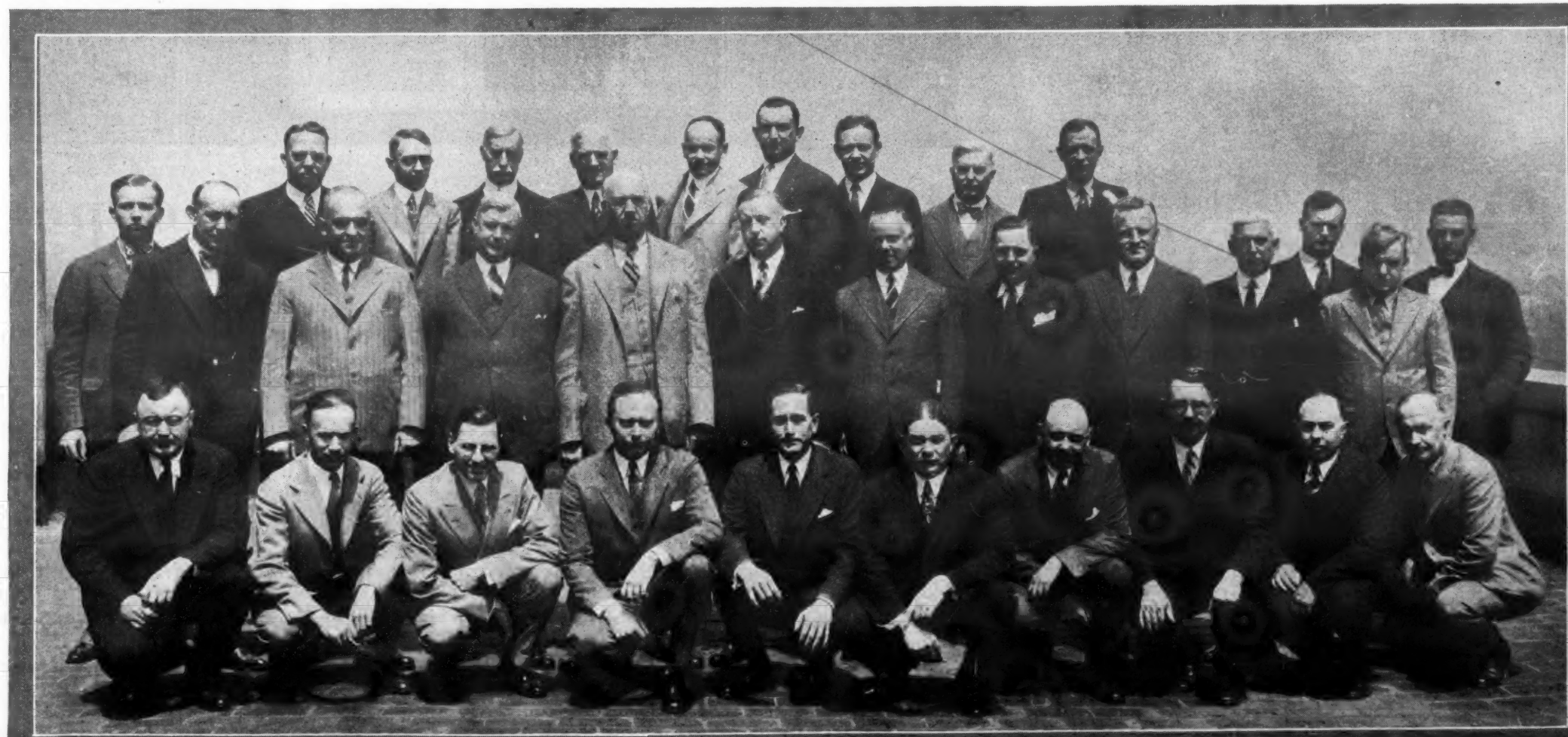
The Extension Division of the University of California is opening in Los Angeles on May 11th an evening class in refrigeration. The instructor is G. Harold Hopkins, engineer, sales department, Vortex Mfg. Co., Claremont, California. The class will meet once a week for a period of eighteen weeks and will include: theory of refrigeration, refrigerating units and their applications, refrigerants, heat transfer theory, types of refrigerators and their construction, the manufacture of refrigerators, refrigerating systems, compression type machines, absorption type, methods of temperature control, insulation requirements for refrigerator cabinets, heat insulation materials, food preservation by refrigeration and the economics of food preservation.

interest, with particular reference to codes and ordinances, standardization, statistics, business ethics, relations with other organizations and with governmental bodies, and having reviewed the efforts, extending over the past several years, to effect a working organization in the industry, it was generally agreed among those present that the time had arrived when definite action should be taken and a determination was expressed to expedite the formation of an organization with the least possible delay.

As stated in the resolution it was the sense of the meeting that the electric refrigeration industry would be greatly benefited by organizing as a section or a division of the National Electrical Manufacturers Association. The experience of the N. E. M. A., its established headquarters and staff, its facilities for carrying on the work of standardization, for the promotion of uniform codes and ordinances, the collection of statistics and other activities commonly accepted as functions of an industry association, were viewed with favor. It was pointed out that

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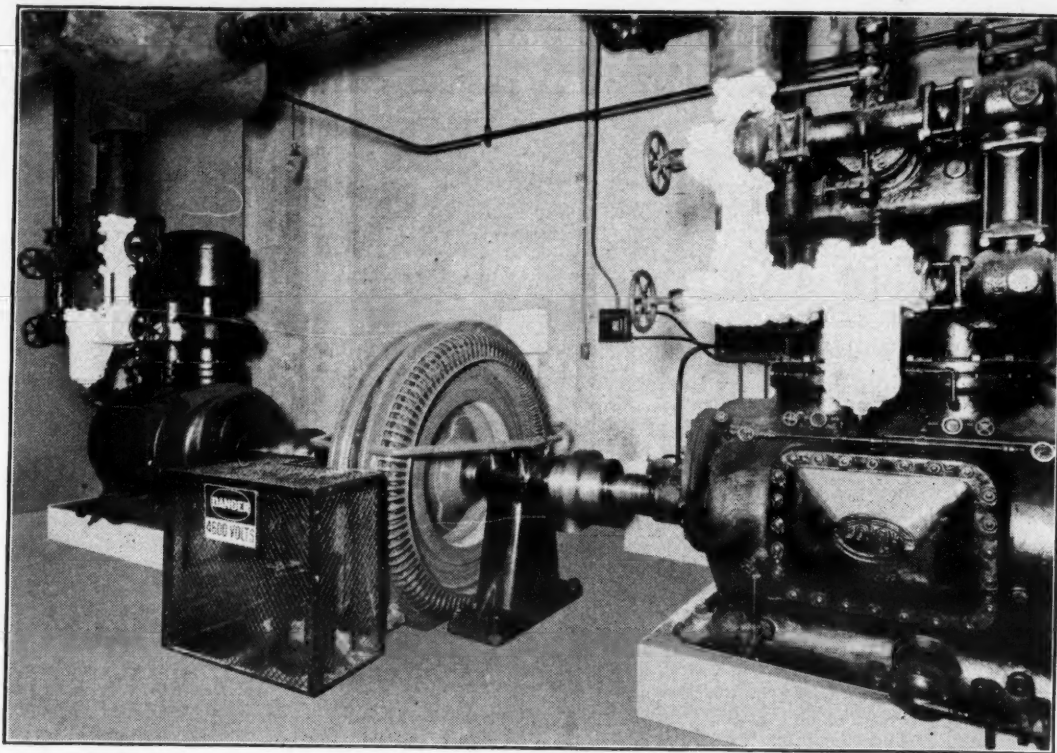
## Electric Refrigeration Men Meet in Detroit at Call of N. E. M. A. to Organize Industry Association



TOP ROW: E. H. Baker, Jr., Charles C. Yates, Fremont Wilson, E. F. Williams, S. N. Clarkson, L. C. Keeley, T. K. Quinn, W. D. Mercer, E. H. Brown. MIDDLE ROW: H. J. Moore, C. W. Hadden, E. B. Mallory, A. H. Goss, Earl W. Whitehorse, C. K. Woodbridge, Frank E. Smith, George W. Mason, W. F. Thatcher, J. B. Churchill, R. W. Kritzer, H. W. Kleist, Sidney B. Carpenter. BOTTOM ROW: Carl Gardner, F. M. Cockrell, P. B. Zimmerman, Howard E. Blood, A. E. Waller, Harry C. Hayes, Arthur E. Cole, M. C. Burnside, H. D. Edward, Thomas Coyle.



## Three Frick Ammonia Machines Refrigerate the Largest Artificial Ice Skating Rink in the U. S.



The two views above show the interior of Olympia Arena, Detroit, Michigan, and part of the refrigerating machine installed there. Three 12"x12" Frick enclosed type compressors carry the refrigerating load. Two of these machines, duplex-coupled to a single motor are shown here. The third unit has its own individual drive. There are two double suction brine pumps, one of 1200 gallons per minute capacity and the other of 900 gallons. They are Gould's make, direct-connected to Lincoln motors of 40 and 30 H. P. respectively. The pressure of the brine after passing through the coolers is only 19 lbs. per square inch.

The installation is so designed that a sheet of ice thick enough for hockey may be formed in

from 6 to 8 hours. This ice may be loosened for removal within an hour by circulating hot brine through the same pipes that carry the chilled brine. The ice is not permitted to melt but is taken off by machinery in from 2 to 4 hours.

The system was installed by the Frick Company, Waynsboro, Pa. under patents owned by George C. Funk & Wilcox Company, Boston, Mass. The process employed was first perfected in connection with Madison Square Garden, New York. The building contains 7,229,000 cu. ft., has a floor area of 77,393 sq. ft. and was built at a cost of \$1,500,000. The seating capacity for hockey is 11,500 and approximately 16,000 for conventions and other events.

### Refrigeration Manufacturers Council Organized at N. E. M. A. Meeting

(Concluded from Page 1, Column 5)

such a relationship would result in economy, greater speed and effectiveness in handling the affairs of the group. Emphasis was placed on the fact that each section of the N. E. M. A. is an autonomous body with its own officers. The association of the sections in one big organization permits the consideration of questions policy and other matters of general interest to all groups.

After due consideration of all angles of the situation it was agreed that the manufacturers of complete refrigeration systems should first organize and then make application to the N. E. M. A. for admission as a division. It was further agreed that the charter should be of sufficiently wide scope to include all manufacturers of complete refrigeration systems regardless of the method of operation, whether by electricity, gas or other motive power and that the limitation as to size or application should be left for determination later.

C. K. Woodbridge, president of the Kelvinator Corp., was elected chairman and Howard E. Blood, president of Norge Corp., was elected secretary. It was recalled that a constitution and by-laws were prepared for the Electric Refrigeration Council late in 1926 at the time consideration was given to making it a permanent organization. In drawing up this document the sponsors had in mind the definite possibility that the Council might eventually become a part of the National Electrical Manufacturers Association and therefore the proposed charter was drawn up so as to parallel that of the N. E. M. A. A copy of this document was secured, read section by section and adopted with the necessary changes. (A complete text appears on pages four and five of this issue.) It was agreed that the organization would become effective when ten or more eligible companies had subscribed to the constitution and by-laws.

The following officers were unanimously elected:

C. K. Woodbridge, president  
T. K. Quinn, vice-president  
Howard E. Blood, secretary  
George W. Mason, treasurer

Five of the nine directors were elected as follows:

C. K. Woodbridge, T. K. Quinn, George W. Mason, Frank E. Smith and E. B. Mallory.

In order to provide a working fund for the Council, it was agreed that each company should pay an entrance fee of \$100, this amount to be applied on the dues which would become effective when the organization is officially in operation.

A resolution was passed thanking Mr. Waller and Mr. Clarkson of the N. E.

M. A. for taking the initiative in calling the meeting and for the valuable advice and assistance.

Those attending the meeting were as follows:

#### Present at the Meeting

E. H. Baker, Jr., Cleveland Iceless Cooler Co.

Howard E. Blood, Norge Corporation.

E. H. Brown, Copeland Products, Inc.

M. C. Burnside, General Necessities Corp.

Sydney B. Carpenter, Brunswick Kroschell Co.

J. B. Churchill, Icemaster Co.

S. N. Clarkson, National Electrical Manufacturers Association.

F. M. Cockrell, Electric Refrigeration News.

Arthur E. Cole, General Necessities Corp.

Thomas Coyle, Roessler & Hasslacher Chemical Co.

H. D. Edward, Carbide & Carbon Chemical Corp.

Carl Gardner, Electric Refrigeration News.

A. H. Goss, Kelvinator Corp.

C. W. Hadden, Copeland Products, Inc.

Harry C. Hayes, General Necessities Corp.

L. C. Keeley, Iron Mountain Co.

H. W. Kleist, Dole Refrigeration Co.

R. W. Kritzer, Peerless Ice Machine Co.

E. B. Mallory, Climax Electrical Refrigerating Co.

G. W. Mason, Copeland Products, Inc.

W. D. Mercer, Kelvinator Corp.

T. K. Quinn, General Electric Co.

Frank E. Smith, Servel, Inc.

W. F. Thatcher, Servel, Inc.

A. E. Waller, National Electrical Manufacturers Association.

Earl Whitehorse, McGraw Hill Pub. Co.

Fremont Wilson, Icemaster Co.

E. T. Williams, Servel, Inc.

C. King Woodbridge, Kelvinator Corp.

Chas. E. Yates, Cleveland Iceless Cooler Co.

P. B. Zimmerman, General Electric Co.

### Seams

in refrigerators are not what they seem. Refrigerator salesmen always have an added advantage when the refrigerator manufacturer uses PEMCO one-piece Porcelain Enamels. Ask us why. Porcelain Enamel & Manufacturing Company, Baltimore, Md.

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## A product for every prospect!

Whatever the prospect needs—a separate unit for his present ice box, a complete electric refrigerator, a water cooler, multiple installation for his apartment or commercial refrigeration for his store—you can meet his requirements somewhere within the Copeland line. ☞ Complete electric refrigerators in all sizes, all prices and all colors. They range from a five-foot model, at \$195, to a 20-foot De Luxe model in optional color trims, listing at \$720. ☞ Dealers handling Copeland are in a position to solicit and to secure business from every class of electric refrigeration prospect. Perhaps a Copeland dealership is available in your territory—we suggest you write us, or use the attached coupon and find out about our exceptionally attractive franchise.

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Copeland, 630 Lycaete Ave., Detroit, Michigan  
I am interested in learning more about the 1928 Copeland franchise.

Name \_\_\_\_\_

Address \_\_\_\_\_

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# Constitution and By Laws of the Refrigeration Manufacturers Council

## CONSTITUTION

### ARTICLE I—NAME

Section 1—The name of this organization shall be Refrigeration Manufacturers Council.

### ARTICLE II—OBJECTS

Section 1—The objects of this Council shall be:

To promote and further the interests of the manufacturers of refrigeration in all its industrial problems.

To promote standardization of refrigeration apparatus.

To collect and disseminate information of value to its members or to the public.

To appear for its members before legislative committees, governmental bureaus and other bodies in regard to matters affecting the industry.

To promote a spirit of cooperation among its members for the improved production, proper use and increased distribution of refrigeration apparatus. To increase the use and improve the quality of refrigeration service to the public.

### ARTICLE III—MEMBERSHIP

Section 1—Membership in the Council shall be limited to corporations, firms, and individuals actively engaged in the manufacture for sale in the open market of complete refrigeration systems. A complete refrigeration system is defined as an apparatus producing refrigeration for any purpose.

(Explanatory Note: A member shall be considered as actively engaged within the scope of the activities of this Council, or of any division or section thereof, when that line of manufacture constitutes a principal and important part of his output regularly and constantly produced.)

Section 2—Members shall pay such dues or assessments and shall exercise and enjoy such rights as the Constitution and By-Laws of the Council may prescribe.

Section 3—Each member shall be entitled to one vote.

### ARTICLE IV—MANAGEMENT

Section 1—Subject to the direction of the members given by resolution, adopted at any regular or special meeting, the management of the Council shall be vested in a Board of Directors consisting of nine members to be elected at the annual meeting of the Council from among the members as provided in the By-Laws.

Section 2—Organization and working rules for the conduct of divisional and sectional activities shall be prescribed by the Board of Directors.

### ARTICLE V—EXECUTIVE COMMITTEE

Section 1—Between the meetings of the Board of Directors management of the Council shall be vested in an executive committee composed of three members of the Board of Directors or officers of the Council.

### ARTICLE VI—OFFICERS

Section 1—The officers of the Council shall be a President, Vice-President, Treasurer and Secretary who shall be elected annually as provided in the by-laws.

### ARTICLE VII—MEETINGS

Section 1—The annual meeting of the Council shall be held during the month of February at such time and place as may be fixed by the Board of Directors and special meetings may be called and held as provided in the by-laws.

Section 2—The regular meetings of the Board of Directors shall be held four times a year immediately following the annual meeting of the Council in February, the second Thursday of May, August and November respectively, at such place and hour as may be fixed by the President, notice of which meeting shall be sent to each member of the Board of Directors at least ten days prior to the date of the meeting.

### ARTICLE VIII—BUDGET

Section 1—A budget of the total expense of the Council for the ensuing year shall be adopted by the organization and at each annual meeting of the Council. The Board of Directors and officers of the Council shall not obligate the Council in excess of the total amount of the approved budget.

### ARTICLE IX—AMENDMENTS

Section 1—Resolutions for amendment, alterations or repeal of any part of this constitution after adopted at any regular or special meeting of the Board of Directors by a majority of the whole number thereof, shall be forthwith submitted to the vote of the members of the Council at its next regular or special meeting or by thirty-day letter ballot. Four weeks written notice of the proposed amendment, supplement or repeal must be given before a vote is required thereon either by a meeting of the Council or by a letter ballot. A two-thirds vote of those voting, provided a majority of the whole number of members' vote, shall be necessary for the adoption of any amendment, supplement or repeal.

## BY-LAWS

### ARTICLE I—MEMBERSHIP

Section 1—The charter members of the Council are those corporations, firms and individuals who have qualified at the time of the organization meeting.

Section 2—Application for membership in the Council shall be made with the Board of Directors in writing, containing an acceptance of their agreement to abide by the constitution, by-laws, and organization and working rules of the Council and shall be signed by the applicant and by not less than two members of the Council as sponsors. If the application is approved by the membership committee and a majority of the entire membership of the Board of Directors, the applicant shall make payment of the dues hereinafter provided for becoming a member of the Council under the terms and provisions of the constitution and by-laws.

Section 3—Each member company shall select from its organization one or more individuals whom it shall designate as its executive representative or representatives, and it may also select from its organization one or more individuals whom it shall designate as its associate representative or representatives. A member may change or withdraw its representatives at will upon giving notice thereof to the executive secretary, except that each member must at all times be represented by at least one representative.

Section 4—An executive representative of a member shall preferably be an executive officer of the member, if a corporation, a partner in a firm, and the member himself if an individual, but he may be an employee of the member if given the authority to act for the member in the course of the Council activities.

Section 5—Any executive representative of a member may vote for that member in any meeting of the Council or of any division or section or group thereof. Any authorized associate representative of a member may vote for that member in any meeting of a section or group thereof.

Section 6—Executive representatives absent from any meeting of the Council or of any division section or group thereof and authorized associate representatives absent from any meeting of a section or group thereof may be represented thereat by proxy, which shall be subject to approval of the chairman of the meeting. A proxy for any meeting of the Association or any division thereof may be given by members only to one of its associate representatives or to an executive representative of some other member. A proxy of a meeting for a section of a group thereof may be given by a member to one of its associate representatives or to any authorized representative of some other member. A representative voting as proxy for another member at any meeting must be authorized to vote for his own member in such meeting.

Section 7—Resignations of members shall be in writing addressed to the Board of Directors and shall be acted upon at the next following meeting of the Board. The resignation of a member shall include every representative of such member, no resignation shall be accepted if the member resigning is indebted to the Council.

Section 8—By a two-thirds vote of the entire Board of Directors any member or representative may be expelled for any cause provided however that such member or representative be given an opportunity to be heard before the Board. On the question of expulsion no accusing or accused member or representative shall be entitled to vote. The expulsion of a member shall in every case include every representative of such member.

Section 9—The membership of any member by or against whom proceedings in bankruptcy or any proceedings based on insolvency are hereafter instituted or of any member who makes an assignment for the benefit of creditors may at the discretion of the Board be terminated as a result of such act and without further action in the premises. Such termination of membership shall in every case include every representative of such member.

Section 10—Application for reinstatement in the Council by any former member whose membership has terminated for any cause shall be made to the Board of Directors in writing, shall state the section or sections with which affiliation is desired, shall contain an acceptance of, and an agreement to abide by, the constitution, by-laws and rules of the Council and shall be signed by the applicant, by not less than two members of the Council as sponsors and by the chairman of the section or sections with which affiliation is desired. If the application is approved by the membership committee and by a two-thirds vote of the entire Board of Directors may reinstate such member upon payment of all Council charges unpaid and having accrued in the interim.

### ARTICLE II—BOARD OF DIRECTORS

Section 1—At each annual meeting of the Council, nine directors shall be elected for a term of one year.

Section 2—Whenever a vacancy shall occur in the Board of Directors, the remaining Directors may by the affirmative vote of the majority of all of them, elect a director to fill such vacancy and directors so elected shall hold office until the following annual meeting.

Section 3—A retiring member of the Board of Directors, who has held the office of Director three consecutive full terms of one year each shall be ineligible for reelection or appointment to the Board of

Directors until after the lapse of one year from the date of his retirement.

Section 4—Only executive representatives of members should be eligible for membership on the Board of Directors.

Section 5—The Directors shall be charged with the management and administration of the Council, direct its policy and action, control its finances, authorize and ratify its expenditures, audit its accounts, appoint subordinate officers and agents, prescribe their duties not otherwise specified herein, fix compensation, elect persons, firms or corporations to membership and otherwise perform all duties and have all powers provided by these by-laws.

Section 6—Special meetings of the Board may be held on the call of the President. Notice of such meeting shall be sent to all Directors at least 10 days prior to the date of the meeting.

### ARTICLE III—EXECUTIVE COMMITTEE

Section 1—Immediately after each annual meeting, the elected Directors shall select five of their number as members of the executive committee.

Section 2—Whenever a vacancy shall occur among the elected members of the executive committee, the remaining elected Directors shall select a Director to fill such vacancy.

Section 3—The executive committee shall meet monthly in the month when no meeting of the Board of Directors is held, and other meetings may be held when called by the President.

Section 4—A majority of the members must be present at each meeting of the executive committee.

### ARTICLE IV—COMMITTEES

Section 1—The Board of Directors shall determine what standing committees are necessary and shall appoint them for a term of one year until the appointment of their successors.

Section 2—Standing committees will be defined and work under the direction of

the Board of Directors within the scope defined for each by the Board, the intention being that such standing committees will carry on the detailed work of the Council along their properly defined functional lines.

Section 3—The chairman of each standing committee shall make annual reports to the Board of Directors of the work of his committee and may, or may be required to, report at any meeting of the Board or the Executive Committee upon any matter requiring action or consideration.

Section 4—Chairmen of standing committees shall not hold office for more than three full consecutive terms until after the lapse of one year from the time of their retirement.

### ARTICLE V—PRESIDENT

Section 1—The Board of Directors immediately after the organization meeting of the Council and each annual meeting thereafter, shall choose from their own

(Concluded on Page 4)

## DEALERS WANTED

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### ELECTRIC REFRIGERATOR

In Iowa, Illinois and Missouri

This is a splendid opportunity to handle a machine which, through its record of over six years of continuous and satisfactory service with a minimum of attention, has established itself in the confidence of its users.

Write to us for particulars and give us full information about yourself.

Keokuk Refrigerating Company  
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We will install and put into successful operation a complete porcelain enameling plant for porcelain enameling your refrigerator linings and parts at a reasonable price.  
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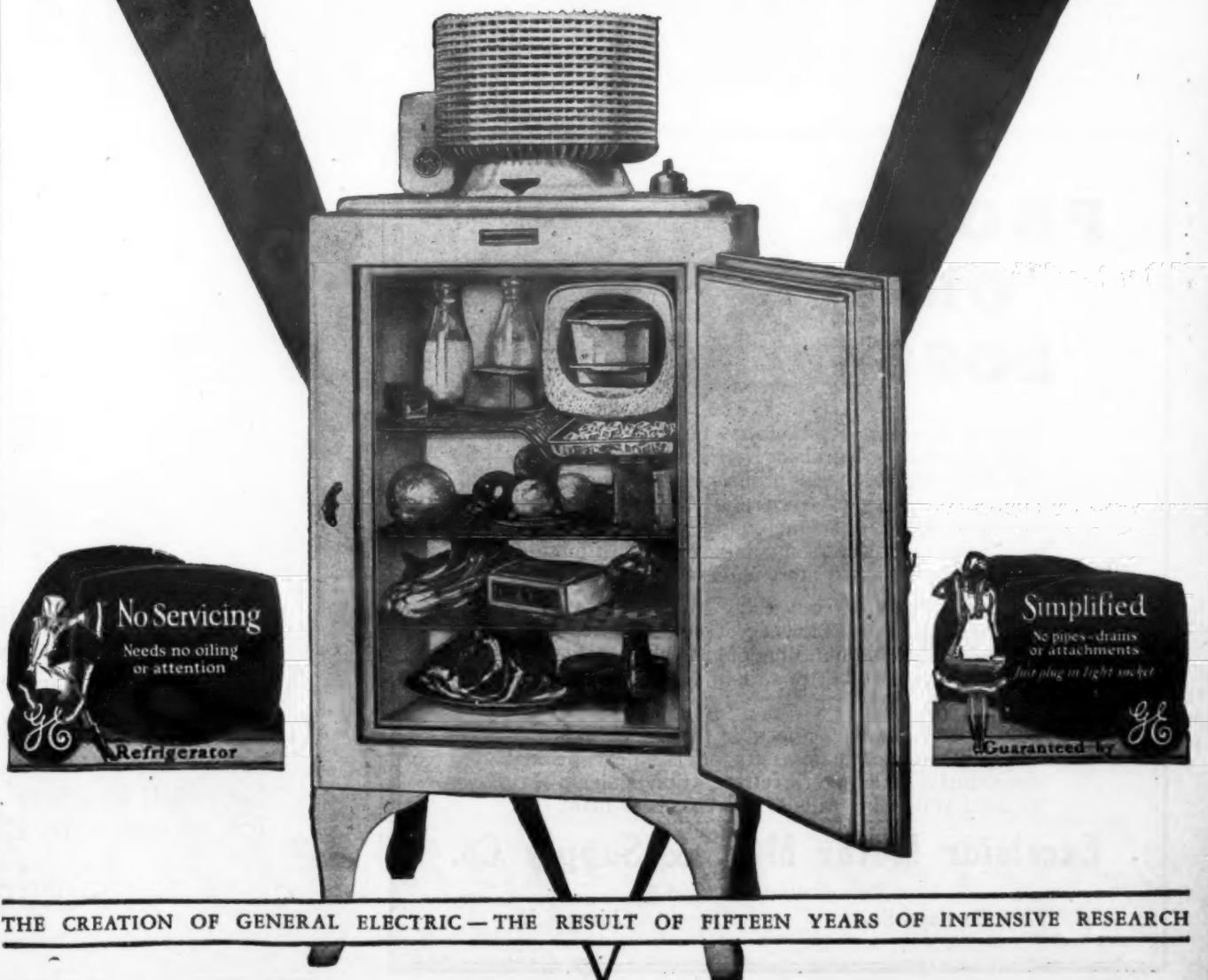
# No belts, fans or drain-pipes

To the dealer who is familiar with the problems of electric refrigeration, the statement that the General Electric Refrigerator has no fans, belts, drains or stuffing boxes, means that it has eliminated the greatest part of his servicing job.

And when he learns that it never needs oiling because a permanent supply of special oil is enclosed in the hermetically sealed casing, he knows that servicing will actually be reduced to a minimum.

Electric Refrigeration Department  
of General Electric Company  
Hanna Building Cleveland, Ohio

## GENERAL ELECTRIC Refrigerator





## BY LAWS OF REFRIGERATION MANUFACTURERS COUNCIL

Continued from Page 3

number a President, who shall hold office for one year from the final adjournment of the annual meeting or until the election of his successor.

Section 2—The President shall preside at all meetings of the Council and, subject to the direction of the Board of Directors, shall be its executive head.

Section 3—The President shall not hold office for more than three full consecutive terms until after the lapse of one year from the date of his retirement.

### ARTICLE VI—VICE-PRESIDENT

Section 1—The Board of Directors immediately after the organization meeting of the Council and each annual meeting thereafter, shall choose from among their own number a Vice-President who shall hold office for one year from the final adjournment of the annual meeting or until the election of his successor.

Section 2—During the absence or incapacity of the President, the following shall perform the duties and have the powers of the President in the following order:

- Vice-President.
- Chairman of the Executive Committee.
- Any other member of the Executive Committee.

### ARTICLE VII—TREASURER

Section 1—The Board of Directors immediately after the election of the meeting of the Council and each annual meeting thereafter, shall choose from their own number a Treasurer, who shall hold office for one year from the final adjournment of the annual meeting or until election of his successor.

Section 2—The Treasurer of the Council shall have the custody of the funds and assets of the Council and shall keep for it proper books of account. He shall have his books audited by certified public accountants at the close of each fiscal year and shall present the report of such audit at the annual meeting of the Council.

Section 3—The Treasurer shall disburse the funds of the Council under the direction of the Board of Directors. He shall keep all funds in a bank or banks approved by the Board of Directors and in the name of the Council, with withdrawals by check signed in such manner as may from time to time be directed by the Board.

Section 4—The Treasurer shall give a Surety Company Bond for the faithful performance of his duties in such amount as may be required by the Board of Directors, a premium on such bond shall be paid by the Council.

### ARTICLE VIII—STAFF

Section 1—The Board of Directors may appoint such executive staff, including Managing Director and other employees as it deems necessary, who shall receive such salaries and shall be employed by such time and shall perform such duties as may be prescribed by the Board.

Section 2—The Board of Directors shall choose a counsel for the Council and fix his compensation and term of office.

### ARTICLE IX—NOMINATIONS

Section 1—At least ninety days before each annual meeting, each Director shall appoint one executive representative, who is not a member of the Board of Directors as a member of the Nomination Committee, the chairman thereof to be designated by the President from the members so appointed. The Nomination Committee shall make nominations for the members of the Board of Directors to be elected at such meeting. At least thirty days before such meeting, the committee shall send to each member of the Council a

list of its nominees, all of whom have agreed to serve.

Section 2—At the annual meeting, additional nominations for Director may be made by any Board representative of a member.

### ARTICLE X—MEETINGS

Section 1—Special meetings of the Council may be called at any time by the President or upon the written request of at least five members of the Board of Directors not less than thirty days before each annual and special meeting. The secretary shall mail to each member a notice of the meeting.

Section 2—The order of business at meetings of the Council shall be as follows:

- 1—Roll call.
- 2—Reading of the minutes of the last meeting.
- 3—Reading of communications.
- 4—Reports of officers.
- 5—Reports of committees.
- 6—Unfinished business.
- 7—New business.

### ARTICLE XI—QUORUM

Section 1—Fifty per cent of the members shall be a quorum of all meetings of the Council, but a less number may adjourn.

Section 2—Five Directors shall constitute a quorum for the transaction of business, but a less number may adjourn.

### ARTICLE XII—FISCAL YEAR

Section 1—The fiscal year of the Council shall be the calendar year, beginning January 1 and ending December 31.

### ARTICLE XIII—LETTER BALLOT

Section 1—Any action of the Council except the election of Directors and officers of the Council or of the Board of Directors may be taken by vote at any meeting or by a thirty-day letter ballot.

### ARTICLE XIV—DUES

Section 1—The annual dues of each member shall be as follows:

- 1—For each executive representative—\$50.
- 2—For each associate representative—\$25.
- 3—For each section of which a member is affiliated in excess of one—\$25.
- 4—On the basis of gross annual sales under the following classification:

Group	Gross Sales	Dues
1.....	Under \$250,000	\$ 50.00
2.....	\$ 250,000 to \$ 350,000	75.00
3.....	350,000 to 500,000	106.25
4.....	500,000 to 700,000	150.00
5.....	700,000 to 1,000,000	212.50
6.....	1,000,000 to 1,400,000	300.00
7.....	1,400,000 to 2,000,000	425.00
8.....	2,000,000 to 2,800,000	600.00
9.....	2,800,000 to 4,000,000	850.00
10.....	4,000,000 to 5,600,000	1,250.00
11.....	5,600,000 to 7,000,000	1,575.00
12.....	7,000,000 to 10,000,000	2,125.00
13.....	10,000,000 to 14,000,000	3,000.00
14.....	14,000,000 to 20,000,000	4,250.00
15.....	20,000,000 to 28,000,000	6,000.00
16.....	28,000,000 to 40,000,000	8,500.00
17.....	40,000,000 to 56,000,000	12,000.00
18.....	56,000,000 to 70,000,000	15,750.00
19.....	70,000,000 to 100,000,000	21,250.00
20.....	100,000,000 to 140,000,000	30,000.00
21.....	140,000,000 to 200,000,000	42,500.00
22.....	200,000,000 to 280,000,000	60,000.00
23.....	280,000,000 to 400,000,000	85,000.00

Each member shall determine the group under which it is to be classified based upon its gross billings for its last previous fiscal year in the classes of apparatus included within the scope of the activities of the Council but in no event shall its actual gross business for its last previous fiscal year be more than the maximum limit of the group selected.

Section 2—Dues shall be payable in advance on June 30 and December 31 in each year.

Section 3—If any member neglects to pay the prescribed dues within sixty days after they shall have become due the treasurer shall so report to the Board of Directors which may suspend or terminate the membership of such member. No termination of membership shall be ef-

fective however, until two weeks after notice thereof accompanied by a copy of this section of the by-laws, shall have been mailed by the Treasurer to the delinquent member.

Section 4—Members elected or additional representatives named by a member except at the Annual meeting shall pay dues upon a quarterly basis for that part of the fiscal year during which they are members of the Council. Representation may be transferred from one individual to another without additional dues.

Section 5—Subject to the approval of the Board of Directors, members resigning or representatives discontinued by members between January first and January thirty-first in any year shall not be liable for dues during the current fiscal year.

Section 6—The basis of or the amount of dues payable by the members, shall be changed or revised only after recommendations of the Board of Directors, by majority vote of entire membership of the Council after thirty days' written notice of the intended change.

### ARTICLE XV—ELECTIONS

Section 1—The election of Directors shall be held before the adjournment of the annual meeting and the persons receiving the largest number of votes for the respective offices to be filled shall be declared elected. Newly elected Directors will assume office immediately upon the final adjournment of the annual meeting.

### ARTICLE XVI—PROCEDURE

Section 1—Excepting if otherwise provided in the constitution and these by-laws, Roberts Rules of order shall govern all questions of parliamentary procedure.

### ARTICLE XVII—AMENDMENTS

Section 1—These by-laws may be amended, supplemented or repealed by the majority of the Directors elect except a vote of a majority of the entire membership of the council shall be necessary to amend, supplement or repeal Sect. 6 of Article 14. In each case thirty days' written notice of the proposed change must be given.

# FORGED NUTS



For

Connecting Brass and Copper Tubing

ESPECIALLY  
DESIGNED  
for  
MECHANICAL  
REFRIGERATION  
REQUIREMENTS

Manufactured in a  
complete range of sizes  
from 1/4" to and  
including 3/8".

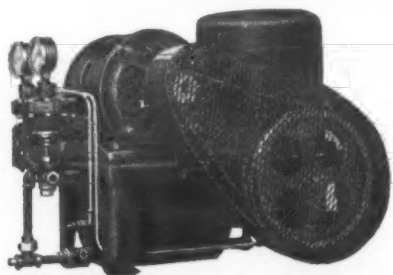
Send a sample or blueprint  
for quotations on parts of  
a special nature. Catalogue  
No. R-30, showing our com-  
plete line of standard fit-  
tings, will be mailed on  
request.

Commonwealth forged nuts are especially designed to withstand the expansion and contraction caused by temperature variances in iceless refrigeration installations.

We manufacture a complete line of forged fittings for mechanical refrigeration requirements. Each fitting is carefully inspected and packed in an individual wrapper. These fittings will not leak gas, air nor liquids under mechanical pressure.

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## PROFIT OR LOSS



For the Butcher, Restaurant, Grocer, Florist or other merchants, Excelsior Refrigeration may mean the difference between profit or loss—success or failure in business. Modern retail business is handled on a close margin and merchants who wish to survive must meet the keen competition with modern store equipment and more efficient methods.

Excelsiors have proven their ability to provide better refrigeration at lower cost—eliminate spoilage losses—enable the handling of larger quantities and greater varieties—better satisfy old customers and attract new trade, etc.

This powerful selling appeal of the Excelsior which is based on economic necessity, offers an exceptional opportunity for energetic refrigeration dealers. May we send you full details of the Excelsior plan.

**Excelsior Motor Mfg. & Supply Co.**

Refrigeration Division

3701 Cortland St.

Chicago, Ill.



MODEL 139

CABINETS BY  
**Seeger**  
SAINT PAUL

Every dealer in Electrical Refrigeration should display this new Line of All Porcelain Cabinets by Seeger for use with Electric Refrigeration or Ice.

The prestige and dominance of Cabinets by Seeger makes for easier sales with less sales resistance. An opportunity provided for profit in place of loss, as prospects will buy these Cabinets for Ice, to use with Electrical Refrigeration later.

**SEEGER REFRIGERATOR COMPANY**  
SAINT PAUL, MINNESOTA



# Pros and Cons of the Multiple System for Apartment Houses

## Comparison of Multiple Gas, Multiple Brine and Individual Unit Installations

OWING to recent legislative action in some localities by which the multiple installation has been prohibited or restricted, much attention has been attracted to the arguments for and against this type of installation. Prominent engineers and leading manufacturing companies have taken decidedly opposite stands on the question. At present, there seems to be little chance of reconciling the opposing viewpoints. General Electric and Servel, for example, are strongly opposed to the use of the multiple system. Frigidaire and Kelvinator, insist that the method is entirely practicable and desirable. Copeland and

Numerous inquiries have been received by ELECTRIC REFRIGERATION NEWS regarding the situation but it has been difficult to secure reliable and unprejudiced data on the subject. The question is complicated by the divergence of opinion on refrigerants.

While there are certain obvious advantages, as well as disadvantages, to each of the methods, it appears that the principal point in favor of the multiple system is economy and that the leading objection to it is lack of safety. Those who favor the multiple system point to thousands of installations which are giving satisfactory service. On the other side it is claimed, that if the installation is made in such a manner that it will be absolutely safe under all conditions, then the cost will exceed that of individual units.

It is generally agreed that the whole subject is one of highly technical character, that the answer must be determined by engineering facts and experience and that the public must be fully protected. ELECTRIC REFRIGERATION NEWS takes the position that the industry is entitled to the fullest information and will present any data which will assist in giving its readers an intelligent understanding of the subject.

The following discussion, extracted from a "Sales and Service Information" bulletin issued by the F. B. Connelly Company, General Electric distributors at Billings, Montana, under date of April 20, 1928, gives some interesting angles on the advantages and disadvantages of three methods of making apartment house installations mainly from the sales view point:

### Apartment House Installations

There is a wide variation in the apartment house field, ranging from the speculative type to the co-operative and higher class apartment hotels. Generally speaking, price or rather first cost will be the determining factor for the selection of refrigerating equipment in the speculative type, while quality and cost of operation is more sought after in the other types.

The architect or builder is called upon to make his selection from one of three methods of apartment house installation:

- (1) Multiple gas (refrigerant) piping systems operated from a remote central refrigerating plant installation.
- (2) Multiple brine piping systems, operated from a remote central refrigerating plant installation.
- (3) Individual unit installations.

### Multiple Gas Piping Central Plant Systems

In some cities, safety codes prohibit this type of installation principally from the standpoint of danger through leaks and explosions, the latter being primarily dependent upon the nature of the refrigerant used. Other objections to these systems are:

- (1) Inaccessibility and danger of accidental leaks in the copper tubing (piped through the walls) such as might be caused by tenant driving a nail or screwing a hook into the wall.
- (2) Complicated system required to pipe refrigerant more than one story.

### Multiple Brine Piping Central Plant Systems

The principal disadvantages characteristic of all brine installations are:

- (1) Space required for brine line piping between the walls. In the modern apartment, every inch of space is valuable and the problem of finding room for brine pipes covered with 3" of insulation becomes important.
- (2) Kitchens must be located near the vertical pipe wells, this limiting the whole apartment layout.
- (3) Hotwater or heating lines should be segregated from the brine lines to prevent loss on heat leakage, thus causing additional expense in the well construction.
- (4) A licensed engineer required 24 hours per day in some localities.

- (5) In high apartments, brine pressures run quite high requiring more expensive equipment to handle the increased pressures required.
- (6) Deterioration of the insulation and corrosion of the pipe lines through chemical and electrolytic action of most brine solutions. Rapid depreciation results accordingly.

### Advantages of Individual Over Multiple Types of Brine or Gas Piping Apartment House Systems

- (1) Ease of installation—No piping required in the walls.

- (2) Accessibility—No danger of leaks, corrosion, etc. in inaccessible places.

- (3) Portability—A refrigerating cabinet connected by piping must be definitely located and cannot be moved from place to place in the room like an individual unit can.

- (4) More equitable arrangement of charges with the tenant—A central refrigerating plant is run at the expense of the owner of the building and provides refrigeration for all the tenants at a cost that is usually estimated and included in the rental on the pro rata basis. An unscrupulous tenant knowing that he has to pay a fixed amount for refrigeration sometimes becomes wasteful to the extent of leaving the refrigerator door open to cool a hot kitchen in warm weather, etc. affecting the efficiency of the entire system and increasing the operating expense. With the individual unit, the tenant pays for just what he uses.

- (5) Individual control of units in each apartment.

- (a) Units may be shut off when not in use. With the multiple types of installation shut off valves are necessary with each unit in order to cut off refrigeration when the apartment is not in use.

These valves are objectionable because of additional first cost, danger of leaks and loss of efficiency through broken insulation on continual shut-offs and shut-ons.

- (b) Temperature Control—Individual units may be controlled closely to suit temperature requirements. It is very difficult to maintain satisfactory temperatures in multiple systems.

- (6) Continuity of Service—Any breakdown with a central plant system will inconvenience all the tenants in the building and the burden of responsibility is on the owner. If an individual unit fails, only one tenant is affected and replacement can be made very quickly.

- (7) Ice cubes and frozen desserts can be

### NEW APARTMENT EXTERIOR FOLLOWS THE COLOR TREND

Not being content with colored kitchens and bathrooms, the architects of the 10 West Elm St. Bldg., Chicago, Ill., have specified an exterior faced with materials in bright shades. The first floor is of dark French blue terra cotta, second, third and fourth floors will be of light blue-green, almost a robin's-egg-blue terra cotta. The main part of the structure is of salmon colored face brick, and the



upper five floors will be trimmed in multi-colored terra cotta of five different hues. Crowning the structure will be a mansard of copper which will ultimately be of a rich green color due to oxidation.

A feature of the design is the absence of unsightly pent houses and water tanks, which are hidden in the mansard. The building which is nineteen stories and basement, is divided into 120 apartments of from 2 to 5 rooms. General Electric refrigeration will be included in the kitchen equipment.

made quickly in individual installation. It is impractical to make ice cubes in a refrigerator operated by a control plant brine system.

### Advantages of Multiple Over Individual Types of Apartment House Installations

- (1) Lower first cost—Multiple brine piping systems vary in cost from approximately the same as refrigerant or gas piping systems to several times as much, depending upon the quality of the installations.

One of the conventional type of multiple gas piping system costs about 20% less than the same manufacturer's individual unit in first cost only. Cost of operation must be considered and will be covered later. (The data in the bulletin is omitted from this article.)

- (2) Quietness of operation—This advantage applies only in comparison with those individual units where the noise problem has not been solved in the unit itself. With a few units in the basement the individual apartments are not likely to be troubled with noise. In some of the smaller apartments, however, the noise of the pump and machinery can be heard throughout the entire building.

- (3) Less machinery to service—Attention can be concentrated on the central plant equipment.

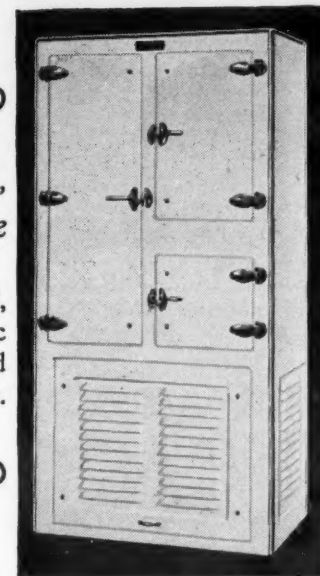
### "Lindy" Carries Letters to Haskellite Customers in St. Louis

An air mail letter, carried by Colonel Lindbergh, was sent by the Haskellite Mfg. Co., Chicago, to all of its customers and prospects in St. Louis, Mo., on February 21, when the Colonel operated the Chicago-St. Louis air mail line. The center spread of a folder received carries reproductions of letters received by the Haskellite company in reply to the mailing carried by Lindbergh. The contents of the letter boosted the use of air mail and advised that the plywood used in the "Spirit of St. Louis" is Haskellite.

## BOHN'S Latest Achievement — The New BOHN "Super Quality" Refrigerator

Beautiful, Distinctive

Can be had in 5, 6, 7, 9 and 12 cubic foot net food storage capacity.



White Porcelain Enamel inside and outside. The machine compartment is ideal for storage space where remote installation is made.

[Featuring the Insulated Baffle Wall]

The lowest prices in our 31 years of manufacturing "Super Quality" Refrigerators

**BOHN REFRIGERATOR COMPANY**  
SAINT PAUL, MINNESOTA

These models are on display at our own stores in

NEW YORK 5 East 46th Street CHICAGO 227 No. Michigan Blvd. BOSTON 707-709 Boylston Street

WORLD'S LARGEST MANUFACTURER OF REFRIGERATORS FOR ALL PURPOSES

Over 250,000 Satisfied Users



**McGRAY**

REFRIGERATORS FOR ALL PURPOSES

For

Grocery Stores · Meat Markets · Hotels · Restaurants · Hospitals · Institutions · Florist Shops · Homes · · · ·

### All McGray Models Are Built For Electric Refrigeration

BY KEEPING FOODS FRESH AND TEMPTING, avoiding spoilage losses, at exceedingly low cost for operation, McGray refrigerators for 39 years have been helping food merchants make more money.

This McGray No. 411 refrigerator meets the grocer's specific needs—generous storage space, quick service arrangement, and above all, thorough refrigeration. The McGray patented system insures a constant circulation of cold dry air through every compartment.

Quality in every hidden detail of construction has made "McGray" the sterling mark on refrigerators. Pure cork-board insulation, sealed with hydrolene cement, keeps cold in and warm air out.

For Electric Refrigeration, or ice. All McGray models may be used with mechanical refrigeration of any type. Remember, it is the refrigerator itself which determines the kind of service you receive.

We welcome correspondence from dealers in electric refrigeration about the complete McGray line.

SALESROOMS IN ALL PRINCIPAL CITIES  
(See Telephone Directory)

## McGRAY REFRIGERATORS

McGray Refrigerator Sales Corporation, Dept. 66, Kendallville, Indiana.

Gentlemen: Please send information about refrigerators, [ ] for grocers, [ ] for meat markets, [ ] for restaurants and hotels, [ ] hospitals, institutions, [ ] florist shops, [ ] homes.

Name \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_



## M. & E. Distributors Meet At Philadelphia



These dealers placed immediate delivery orders for the new M. & E. Bi-Tone models which totaled more than the sales of any six months' period in 1927.

### MERCHANT & EVANS HOLDS FIRST ANNUAL SALES CONVENTION

More than one hundred distributors and retailers of Merchant & Evans Co., in the Philadelphia area, participated in a Dealers' Convention held by the company March 30 and 31, in Philadelphia. This marked the closing of the first year of "M. & E." distribution. Merchants & Evans Co. is now preparing to go into a much wider distribution, having thoroughly tested its products in the Philadelphia zone, where the installations and servicing are done by the manufacturer.

After witnessing steps in the manufacture of the refrigerator, and inspecting the assembling works, the distributors adjourned at 12:30 for luncheon at the Ritz-Carlton hotel, where Powell Evans, president of the company, explained the outstanding features of the refrigerator, and discussed mechanical and merchandising problems.

The new all porcelain "Bi-Tone" models in white and light gray were shown and are expected to be one of the best sellers during the 1928 season. All were enthusiastic over the new line of domestic and commercial units, and as a result of the meeting orders were received for immediate delivery in excess of the total sales for any six months of 1927.

The Sales Convention was presided over by R. S. Brunhouse, general sales manager. Mr. Brunhouse is president of the Electric Refrigeration Trade Association of Philadelphia. S. J. Benn, of the refrigeration engineering department discussed the technical side of the problem at a special morning session in the Philadelphia Assembling Works.

Merchant & Evans Co. has its main offices in Philadelphia at 2035 Washington Ave., and a large sales and show room at 1615 Walnut Street. The refrigeration manufacturing plant is located in Lancaster.

Dealers attended the Convention from Newark, N. J., Trenton, Atlantic City, Reading, Allentown, Baltimore, Harrisburg, Shamokin, Scranton, Wilmington, and other cities within the present operating zone.

### BIG PLYWOOD MERGER

Special stockholders' meetings of both the Atlas Plywood Corp. and the Empire Mfg. Co. have been called for the early part of May to approve the recommendations of the directors of both companies for a merger and unification of the two companies, under which the Empire assets will be acquired by Atlas.

This merger would put the Atlas Plywood Corp., according to Ralph M. Buck, president, in a strategic position to expand its business in the fast growing manufacturing centers of the south, and would furnish additional plant capacity to meet the demands of its rapidly mounting sales in the middle-west.

The Empire Mfg. Co., with plant at Goldsboro, N. C., manufacturing plywood packing cases, was organized in 1910. Its gross business approximates one-third that of Atlas. A. H. Edgerton, Herman

Weil and G. S. Daniels, who have so successfully developed its business over the past seventeen years, will actively manage the Empire manufacturing division of the Atlas Plywood Corp.

As of February 25, 1928, the Empire company's ratio of current assets to current liabilities was over 5 to 1, with cash, U. S. Government Bonds and Bank Certificates of Deposit alone exceeding three times total current liabilities. At that date the company had no funded debt and no liabilities other than current liabilities.

Customers of the Empire company include, among others, the rayon, textile, and other industries.

### NEW YORK LEADS STATES IN ELECTRICITY PRODUCED BY CENTRAL STATIONS

#### Montana Produces 99 Per Cent by Water Power

A report issued by the United States Geological Survey, Division of Power Resources, dated April 16, indicates the production of electric power by public utility power plants in the United States in 1927. The amount in kilowatt-hours produced by the utilities of the ten first states were:

State	Kilowatt-hours
New York	11,988,589,000
Pennsylvania	7,824,527,000
California	7,355,548,000
Illinois	6,318,563,000
Ohio	4,950,487,000
Michigan	3,773,928,000
Massachusetts	2,609,127,000
Washington	2,121,939,000
North Carolina	2,086,547,000
West Virginia	2,047,628,000

The ten leading states in the production of kilowatt-hours by water power in 1927 were:

State	Kilowatt-hours	Pct. of total power
California	6,645,934,000	30.4
New York	5,230,216,000	43.6
Washington	3,053,467,000	96.8
Alabama	1,532,730,000	82.1
Montana	1,381,096,000	99.0
North Carolina	1,137,003,000	54.5
Michigan	1,009,135,000	26.7
Wisconsin	956,954,000	49.4
Pennsylvania	950,856,000	12.2
Iowa	808,760,000	57.3

### Commercial Investment Trust Corp. will Finance Servel and Electrolux Sales

Servel Sales, Inc., announces the formation of a contract between that company and the Commercial Investment Trust Corp. of New York City, under which there is now available for all Servel and Electrolux dealers a financing plan for both wholesale and retail refrigerator sales.

### Aberdeen Distributor Holds Dealer Meeting

The McLaughlin Electric Supply Co., of Aberdeen, So. Dak., was host to 27 of its dealers at a meeting held in Aberdeen recently.

### Appointed Iroquois Distributor

The Turner Auto Supply Co., of Texarkana, Ark., has been appointed distributor of Iroquois electric refrigerators.

### SCHNEIDER CHANGES NAME OF PRODUCT AND FORMS NEW CO.

The Icelect Corp., Omaha, Nebr., has recently been organized to manufacture and sell the Icelect electric refrigerator originally developed by the Schneider Mfg. Co., Omaha. A. E. Schneider is president and F. J. Schneider, secretary and treasurer of the new corporation.

Eight different models will be included in the Icelect line. Cabinets will be furnished in any color desired by the purchaser. The cork base for the compressor which was included in the original specification has been replaced with coiled steel springs.

A catalog illustrating the complete line of Icelect units is now in the hands of the printer and will be available for distribution shortly. The manufacturers expect to begin delivery of the machines within the next thirty days.

## "An Authority for 40 Years"

WHEN, about three years ago, the Refrigeration Industry became aware that Welsbach intended to place on the market an "electric" refrigerator, many people asked, Why?

The answer was obvious to refrigeration experts and technicians responsible for the scientific progress of the Industry.

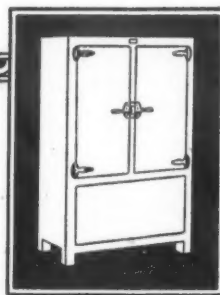
It was this: "There is really no such thing as 'Electric' refrigeration. The basic problems of mechanical refrigeration are found in the fields of Thermo-Dynamics (a study of heat-action and how to control it) and the chemistry of gases. Welsbach has been an authority on these subjects for 40 years.... Watch Welsbach!"

Welsbach was free to start at the very fundamentals of refrigeration. The problem was considered from the standpoint of how to eliminate shortcomings in existing refrigerating systems and build anew around correct basic principles.

A refrigerant—Alcozol—was adopted which functions under only one-third the pressure of others in common use. It has a rather faint, clean, inoffensive fragrance. It may safely be held in the hand. It has no harmful effect on respiration. It does not lose its ability with continued use.

An entirely new and simplified Compressing Unit was evolved to handle Alcozol. It has large capacity and runs under Low Pressure—20 pounds

"There is really no such thing as 'Electric' refrigeration. The basic problems of mechanical refrigeration are found in the fields of Thermo-Dynamics (a study of heat-action and how to control it) and the chemistry of gases. Welsbach has been an authority on these subjects for 40 years... Watch Welsbach!"



—and at low speed—  
280 R. P. M.

To enable this better refrigerant to function at its best, the Welsbach laboratories developed an entirely new lubricant—not a mineral oil—and a lubrication system which completely submerges every moving part in lubricant, forming a liquid seal and reducing friction and wear to a minimum factor.

Chemical problems thought unsurmountable were conquered. Corrosion and oxidation simply do not take place. Thus internal conditions are made right for indefinite years of wear.

Cabinets of one-piece steel were created—flush paneled—good to look at—insulated with from 2 to 3 inches of solid cork board.

And these are but a few of the many Welsbach developments!

The remarkable service records of Welsbach Low Pressure Refrigerators attest the fact that Welsbach Low Pressure Refrigeration is perhaps the most important single development the Industry has seen in years.

REFRIGERATION DIVISION  
Welsbach Company Gloucester City, N.J.

Welsbach Cabinets and equipment—Household and Commercial—from foundry to finished product—made in the same plant.

# Welsbach

## LOW PRESSURE REFRIGERATION

### Servel Girls Basket Ball Team 1927-1928



Champions of the Evansville City Industrial League—sponsored by the Y. W. C. A., Evansville, Ind.



## 3,660 Hours of Hard Work Each Year—That's the Job Before the Average Machine

Says Average Machine Does More Work in One Year Than an Automobile Does in Three.

F. B. Riley, Member A. S. R. E.

THE life of a machine depends on several conditions, some of which are controllable, while other factors are beyond the ordinary range of controllable conditions.

Many persons who are interested in the purchase of an electric refrigerator, really believe that the machine is still in the embryo stage of development and that eventually, when it has emerged from the shell, they will buy one, if and providing, of course, the unit does not cost too much money, will give a lifetime of service and cause no fuss or bother in operation and care.

We often wonder if these same people waited for an automobile to be perfected before considering the purchase of one, and if they have not bought a radio because some years hence, other and important improvements may be made.

A few days since, a remark was made during a discussion of refrigerating machines, that "they were not perfected yet" and that "radical improvements would probably be made very shortly which would place all present types of machines in the obsolete class, that they did not last long enough and required too much service, etc.

Usually statements of this kind come from those who have only a superficial, or hear-say knowledge of the real situation in the refrigeration industry. Let us compare the electric refrigerator with the best known and most widely distributed mechanical device, the automobile, in point of perfection and immunity to service.

### The Automobile

Automobiles have been in more or less general use for thirty years. We buy them on price, or on reputation, or because they have a paint job which appeals to the aesthetic sense of some particular member of the family—we buy them for pleasure or perhaps for transportation but in any event we buy them and find that we usually get our money's worth. There are no outstanding failures in a mechanical sense. They are mostly all good and we pay the price we can afford, and are more or less satisfied for a year or two until the paint wears off, or a new gadget is added to a new model and then we promptly yearn for the new one until we finally dig down and take on a new asset or liability, depending on our viewpoint.

In all we probably drive the old bus a total of, say, 25,000 miles before we David Harum it off on someone else and during the two or three years we average about 20 miles per hour or a total of 1,250 driving hours, including the time taken by the police squad in removing the bus from a non-parking location downtown to the auto pound. Think of it,—1,250 hours of actual operating time and then the bus is considered a candidate for the second hand dealer to write sonnets about. During those 1,250 hours of pleasure and otherwise, we have had the old hack in the service station for adjustment, overhauling, replacement of parts, repainting, etc. We have towed and been towed, and in general enjoyed all of the thrills and griefs of normal automobile experience, if we are still living to tell the tale.

### The Electric Refrigerator

Now while all of this activity via auto has been going on, what has happened to our funny little refrigerating machine which stays at home quietly purring, or percolating, or buzzing along. How long has it been working and giving an almost human touch to our daily life,—has it been faithful or has it broken the faith or just what has it done to earn brick-bats or bouquets. The chances are about 99-44/100 per cent to 1 that it has been quietly purring along or snoozing a few hours at a stretch but when we come home from the auto ride, tired and hot, we find it on the job with the cool comfort that we find so delightful at the end of the journey. If we clock it off, we find that it has been operating about ten hours a day for 365

days of the year and this year an extra day or a grand total of 3,660 hours of quiet and faithful operation.

It has not been coasting down hill, running easily in high gear on a smooth concrete road with a strong wind pushing it along. It has been working like an auto in low gear ploughing through sand. Hard gruelling work all the time and not only some days but every day whether we are around to watch it, refuel it, take it to the garage for repairs, or whatnot. This funny little fellow is not as fussy or complicated as a big eight cylinder auto but it has some mighty delicate devices included in its mechanism and they all have to synchronize or it gets a "tummy ache."

It has an electric motor, a compressor, an expansion valve, or a float controlled valve, suction valves, discharge valves and ample opportunity, if it were not for the eternal vigilance of the manufacturer, for dirt or other foreign matter to "gum-up" the works, and finally a control which must start up all this mechanism at the tiniest change in temperature of the cabinet and stop it again when it has removed the excess heat from the cabinet and all of this time, the machine must receive its proper amount of lubrication, automatically and unfailingly. Some job, even for a little machine?

### The Two Compared

As a matter of fact this splendid little mechanism does more honest to goodness work in one year's operation, 3,660 actual hours, than is performed by the average automobile in the first three years of its service and we expect the refrigerating machine equipment to go on for another ten years without service or overhauling. There may be many automobiles in service today that have averaged 1,250 hours per year for thirty years, which is the actual hours of service performed by a refrigerating machine in ten years of service, but we do not know of them. Automobiles which were built thirty years ago have been in museums as sacred relics for the past ten or twenty years, but there are many refrigerating machines pounding along faithfully that were installed ten or more years ago and which have singly outperformed the normal life of ten consecutive automobiles and some of these faithful old machines could hardly be bought for their weight in gold, if the owner could not be assured of one as good in return.

There are today a number of good refrigerating machines which, if properly installed, will give long and faithful service at a minimum of fuss, bother and expense. The outstanding machine has not put in its appearance, as yet. No one manufacturer has a monopoly on engineering skill and the small machine of today is a development, or embodiment of the experiences of many engineers who have worked towards simplification and improvement of the accessories of the unit, such as expansion valves, float valves, temperature controls, etc., and the standardization of shop practices and inspections to the end that every machine may be all that we have a right to expect it to be,—a sturdy, reliable, quiet and economical household appliance at a cost within the reach of the average purse. A score or more of manufacturers can deliver such a unit today.

### "OFFICIAL NEWSPAPER OF THE INDUSTRY"

BYLLESBY ENGINEERING AND  
MANAGEMENT CORPORATION  
231 South LaSalle St., Chicago

April 9, 1928

To all Appliance Sales Managers with  
copy to General Managers.

Gentlemen:

CIRCULATION LETTER NO. 42

ELECTRIC REFRIGERATION NEWS

The subject of electric refrigeration is of such vital interest to the central station industry as a whole this year, that we feel every local manager and salesman who has anything to do with the sale of electric refrigerators should be receiving *ELECTRIC REFRIGERATION NEWS* regularly. The paper is published in Detroit and is at present considered the official newspaper of the electric refrigeration industry.

Of particular interest, in coming issues, the paper proposes to report the progress of the N. E. L. A. Refrigeration Committee's advertising and merchandising program. In addition to the news of the industry, the editorial columns are filled with valuable information regarding the methods of successful dealers and activities of central stations which are promoting this valuable load builder. Every issue of the News contains ideas and information well worth the price of the subscription.

Undoubtedly this paper is now coming to the desk of many of those who receive this letter, but it is felt that if your refrigeration salesmen and local managers get this paper regularly there will be more interest taken in promoting electric refrigeration.

Yours very truly,

J. W. Devereaux,  
Manager, Merchandise Division.

### Will Sell General Electrics in Bay City, Texas

Taylor Brothers of Bay City, Texas, furniture dealers, have added the General Electric refrigerator which they will handle for their section of the Gulf Coast.

# The EBCO

## ELECTRICAL COOLER FOUNTAIN



**Featuring AUTOMATIC  
STREAM CONTROL  
REGULATING VALVE**  
Now standard on all "EBCO"  
Fountains

It insures maximum drinking  
efficiency regardless of pres-  
sure fluctuation.

"EBCO" Water Cooler Models  
are especially adapted to elec-  
trical refrigeration. They com-  
bine all the sanitary features—  
mechanical sturdiness—design  
and finish for any type of in-  
stallation.

There is an "EBCO" Fountain  
for every application.

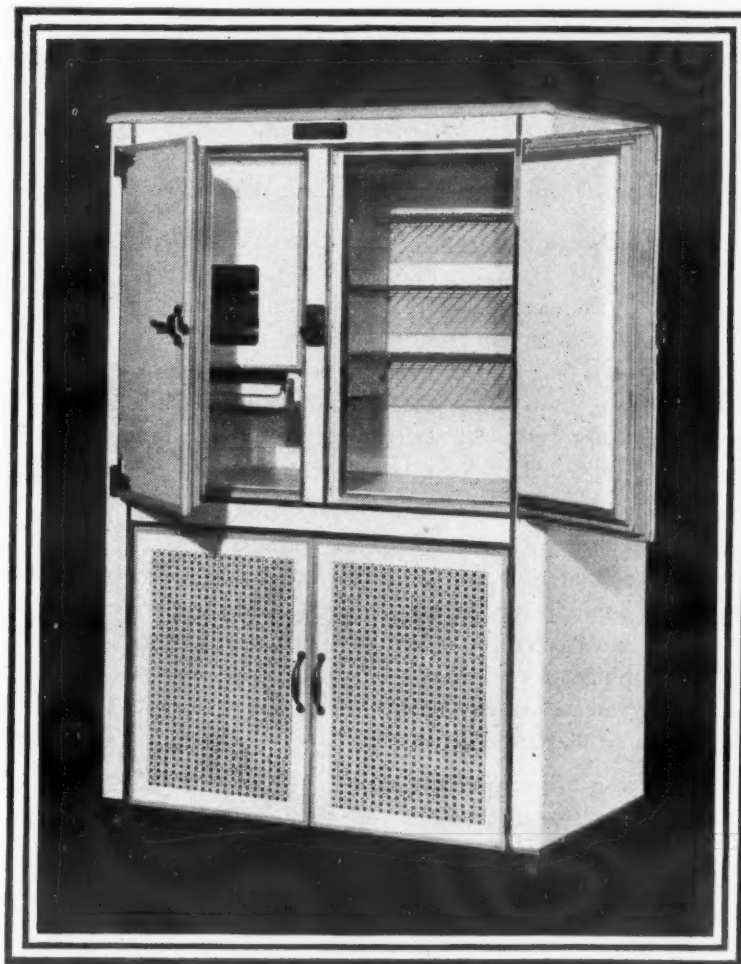
Quality  
the best

Efficiency  
the highest

**WRITE  
for  
Catalog**

**The DAEBINGER SANITARY MFG. CO.**  
194 Lucas Street Columbus, Ohio

Manufacturers also of Ventilated Closets, Urinals, Wash Sinks,  
and Steel Enclosures for Toilet Rooms



## The first Kelvinator Electric Refrigerator is giving good service after twelve years of operation

Old Number One Kelvinator has plugged along giving satisfactory refrigeration service since 1915. Even this machine, the first electrical refrigeration unit ever offered the home, was a reliable, foolproof unit.

Every Kelvinator ever made since, although improved and refined, has shared this same, dogged reliability.

It is on this long record of service and development that we offer the new Kelvinator Electric Refrigerator to the central station as a unit that you can conscientiously and profitably recommend to your customers.

**KELVINATOR CORPORATION**  
Detroit

## SPECIFY ANSUL SULPHUR DIOXIDE

Write Us—  
There is a Satisfied User Near You

The Product With a Factor of Safety

**ANHYDROUS SULPHUR DIOXIDE**

Absolute Protection for Refrigeration

**ANSUL CHEMICAL COMPANY**  
MARINETTE, WIS.

Canadian Distributors: Grasselli Chemical Co., Ltd.  
Toronto—Montreal



# ELECTRIC REFRIGERATION NEWS

The Business Newspaper of the Electric Refrigeration Industry

PUBLISHED EVERY TWO WEEKS BY

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## Industry Information

**E**LECTRIC REFRIGERATION NEWS will publish for the first time, in the June 6 issue, a classified index of electric refrigeration equipment, materials, parts, accessories and service as offered by all suppliers now known to be actively engaged in the business. It is quite possible that this initial effort to collect and classify information regarding the sources of supply will not result in a complete list of all desired items and companies. The publication of such data, however, usually results in bringing to light the missing information, and subsequent revisions of the index will make it more and more valuable to the industry.

Those readers who have followed the development of the News and its service to the industry have noted the growth of the directory of manufacturers which has been published from time to time. Starting with a comparatively small list of companies the directory has reached the stage where it gives a fairly complete picture of the manufacturing branch of the industry. This effort was intended primarily to bring out the facts as to the actual number of companies making electric refrigeration equipment in contrast with the vague and exaggerated information which was current prior to the establishment of the News as the accepted mouthpiece of the industry.

One of the most practical services rendered by a business publication to a young and growing industry is the dissemination of information regarding the sources of supply for various products which enter into the production, distribution, installation and servicing of equipment.

### Industry Boundary Lines Indefinite

It is not an easy matter to secure all of the desired data and present it in a form which will meet the needs of all branches of the industry. To begin with, no one knows as to the exact boundary lines of the industry. Certain manufacturers have readily accepted and adopted the term "electric refrigeration" as a suitable designation for the type of equipment or service which they offer. Beyond this group are others manufacturing equipment which might be logically termed "electric refrigeration" but which has become known and established under other designations.

Beyond the circle of manufacturers of complete systems, or accessories which find a definite field of application to electric refrigeration, there is a wide circle of producers of raw materials and semi-fabricated parts who think of the electric refrigeration industry as only one of many outlets for their products. They may have received orders or contracts for certain quantities of castings, stampings, forgings or other processing operations without becoming actively aware of the possibilities of the electric refrigeration industry as a volume market.

Manufacturers of this type, who are sometimes known as the "fringe" of the industry, are often seriously concerned as to just how far they can afford to go in making a special study of the requirements or in providing special tools or equipment to meet these requirements. The business paper of an industry provides a valuable service to such manufacturers by giving a broad picture of its scope and character and an indication of its present and possible future progress. Thus the directory information is valuable not only to those who seek sources of supply, but also to the possible suppliers.

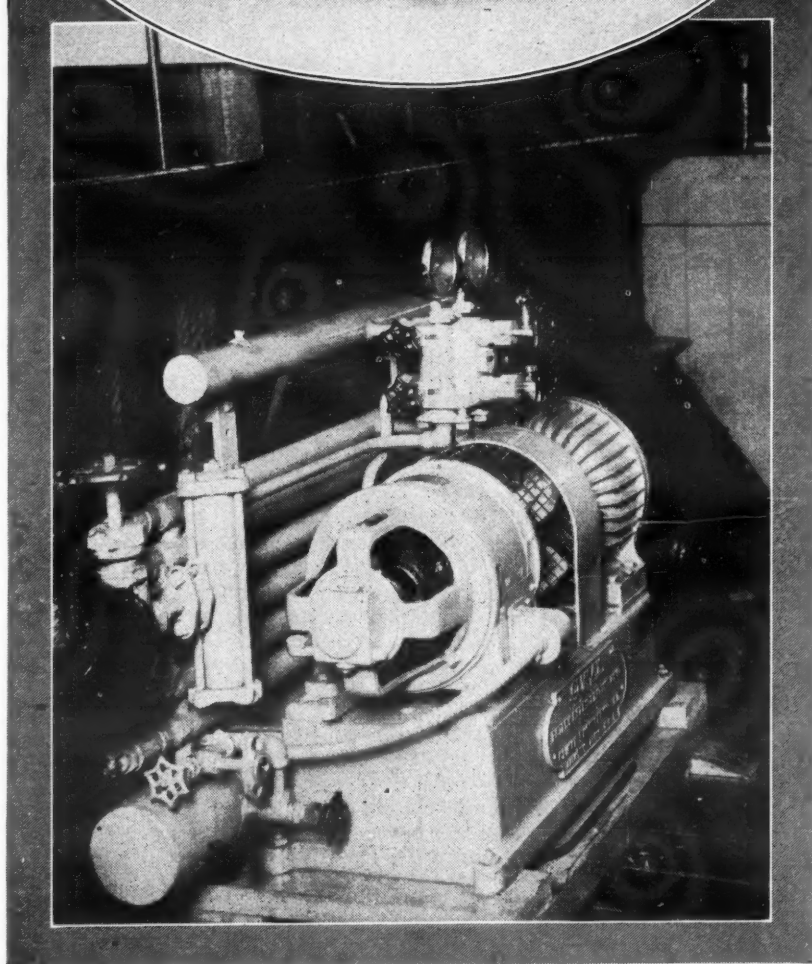
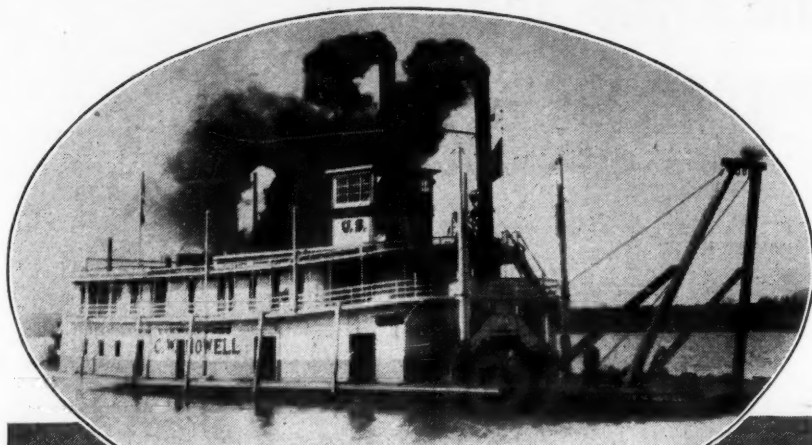
### Many Minds Contribute to the Industry

The public likes to think of a particular individual as the "inventor" of a perfected machine and in the absence of an outstanding personality who may be credited with having perfected the ingenious contrivance, quite naturally assumes that the company is at least responsible for all of the fine points in the device. It is usually true that the brains and experience of many organizations have rendered much supplementary assistance in the completion of an intricate machine.

The electric refrigeration industry needs, and will greatly profit by, the help of the engineering and research departments of the hundreds of producers of the materials and parts needed to make up a complete electric refrigeration system. After all, the successful operation of electric refrigeration equipment depends largely upon a multitude of small things. The principle of operation must be correct, of course, but the real satisfaction of the customer will likely hinge on joints that will not leak, oil that will not disintegrate, valves that will not stick, insulation that will not absorb moisture, finish that will not peel, doors that will not warp, a latch that will not get out of order and a hundred other little things which determine whether or not the machine continues to function efficiently.

Manufacturers are searching the whole field of industry for every item and bit of information which will assist them in improving their product or lowering its cost. The Classified Index now being compiled will facilitate this activity. The fullest co-operation of manufacturers is invited and suggestions for improving the service will be welcomed.

## Climax Machine Solves the Food Problem on Mississippi Snag Puller



Being away from a source of provisions for several days at a time the "C. W. Howell" experienced considerable difficulty in preserving stocks. The installation of a Climax machine with a steam driven brine pump solved the problem and provided ice for water coolers installed throughout the boat.

## SAYS PERKINS INVENTED FIRST MACHINE IN 1834

General Necessities Corp.  
Detroit, Michigan

May 3, 1928

Electric Refrigeration News,  
Detroit, Michigan.  
Gentlemen:

In your issue of April 25 I note the caption—"Who was the Inventor of the Refrigerating Machine?" I also note that Mr. J. R. Lassiter, Jr., of the Solid Carbonic Co., Ltd., 100 East 42nd Street, New York City, asks if there is a record of invention of the refrigerating machine antedating Doctor Gorrie's of 1850.

In 1834, one Jacob Perkins, engineer, who I understand was an American citizen, but at that time was residing in the city of London, took out British patent No. 6662 for—"Improvements in the Apparatus and Means for Producing Ice and for Cooling Liquids." The description of the machine is quite complete and is of the conventional compression type, (the compressor being operated by hand). This machine has an evaporator, condenser, expansion valve and the compressor; in other words, all the necessary elements possessed by any compression refrigerating machine of today.

Mr. Perkins recommends the use of ether as his refrigerant; but, one is led to believe by the reading of his application that he knew of other volatile liquids as well but chose ether. He was careful to limit his claims and evidently recognized certain work had been done prior even to his application; so far as I know, however, this is the first record that has been preserved of a conventional compression system using a volatile liquid.

Dr. Gorrie's machine, which came some eleven (11) years later, was a dense air outfit and did not depend on the liquefaction of a vapour. Machines using the Gorrie principle have always had but a limited application because of the large amount of power required for the amount of refrigeration produced, while machines built after the idea of Perkins, of course, cover the earth.

Yours very truly,  
HARRY C. HAYES,  
Chief Engineer.

First Passenger—Come on up and see the iceberg!

Second Passenger—I'm not interested. I've got an electric refrigerator at home.—  
Detroit News.

## SLOAN SAYS ADVERTISING IS PROMOTER OF PROSPERITY

"Advertising is a direct promoter of prosperity for the reason that it stimulates a desire on the part of the people to have things that they would not otherwise even know about, therefore creating an incentive to work for those things," Alfred T. Sloan, Jr., president of General Motors Corp., told more than 1,000 guests at the annual dinner of the Bureau of Advertising, American Newspapers Association, at the Waldorf Astoria, New York, April 26.

"I do not think," said Mr. Sloan, "that advertised products are higher in price due to large advertising appropriations. On the contrary, demand is stimulated to buy when the manufacturer increases production and he is able to reduce cost through the influence of volume and hence reduced prices for the purpose of still furthering increased volume."

## "END OF WINTER SALE" CLEANS OUT OLD MODELS

Having on hand 16 models of Servel electric refrigerators at the opening of the Spring selling season, the Gulf Power Co., Pensacola, Florida, put on a special "End of Winter Sale" in which these models were cleaned out within a short time.

As a special inducement terms were made particularly attractive and twenty-five dollars trade in was allowed on used refrigerators. The last allowance had considerable to do with the success of the campaign, inasmuch as a large percentage of the prospects seem to have in mind the question of "What shall I do with my old ice box."

Employees of the company were offered a special price and a number of sales to them resulted.

## Electro-Kold Announces New Midget Apartment Model

Electro-Kold Corp., Spokane, Wash., announces a new model electric refrigerator, designed especially for small apartments.

"This new unit is about half the size of the apartment model which we have been manufacturing for some time," says H. N. Masterson, vice-president of the company. "It has a single tray and three cubic feet of space."

More than 100 men are now employed in the company's shop, according to Mr. Masterson.

## USE LABORATORY TESTS TO GET "YOUR MONEY'S WORTH"

Electrical Testing Laboratories,  
80th St. and East End Ave.,  
New York.

May 3rd, 1928.

Electric Refrigeration News,  
Detroit, Michigan.

I noticed in your issue of April 11th, a very interesting and very informative editorial on Comparative Tests. Your discussion on this subject is certain to make for clarity of thought in this direction, and to be generally beneficial to the industry. However, there is one paragraph in this editorial which I believe is apt to give an erroneous impression to the reader, and to which, therefore, I would like to direct your attention. This paragraph reads as follows:

"From the viewpoint of the ultimate user, laboratory tests have comparatively little value. The operation of an electric refrigerator in a New York laboratory gives little indication of the probable performance of another machine bearing the same trade name, probably a different model, installed in a different make of cabinet by an inexperienced dealer in Texas, connected to the lines of a municipal lighting plant having a fluctuating voltage and used by a colored mammy who discovers that she can cool the kitchen by leaving the refrigerator doors open."

Probably some of your readers know that the Committee on Electric Refrigeration, Commercial National Section, of the National Electric Light Association, in the summer of 1925, published a very useful report dealing with the electric refrigerator field as it existed at that time. It embodied a report of the sub-committee on tests and included a number of actual tests of refrigerators conducted by that sub-committee. This sub-committee at that time established a testing procedure which has stood with comparatively little change since as being the most satisfactory so far devised. It contemplated tests made upon any one refrigerator at three different room temperatures, 70, 80 and 90 degrees Fahrenheit. These tests are made first with no load, that is, with the refrigerator doors closed and nothing inside tending to raise the interior temperature. The same tests are then repeated with a definite load placed inside the box, resulting in a definite input of heat to the box, representing that from food which in practice might be placed upon the shelves.

Now it would appear that if two electric refrigerators are tested under these conditions "in a New York laboratory," resulting in one refrigerator operating at a given room temperature with fewer kilowatt-hours of current than the other, that same one might reasonably be expected to operate "in Texas connected to the lines of a municipal light plant having fluctuating voltage" with a correspondingly lower energy consumption than the other. The actual amount of energy consumed by one refrigerator in Texas would probably not be the same as it had consumed in the laboratory in New York but its relative position with respect to other refrigerators tested in the same laboratory and operated by ultimate consumers under similar conditions in the field, would be the same.

I am afraid that the paragraph in your editorial which I refer to, leave the impression that laboratory tests are of no value in choosing a refrigerator for installation in the home. On the contrary, if an intelligent consumer of electricity were able to take laboratory reports covering all available electric refrigerators, he probably would be able to choose the refrigerator which would operate in his home most economically. This does not mean the refrigerator with merely the lowest electrical consumption. He must intelligently consider relation between electrical input, interior temperatures, cubic feet of capacity, square feet of shelf area, and certain factors of operation such as motor noise, reliability and freedom from possible hazards. Most of these things can be shown in a testing laboratory report.

In this connection, I am reminded of a paragraph in "Your Money's Worth" by Stuart Chase and F. J. Schlink. I am taking the liberty of attaching hereto a copy of this paragraph. The application is obvious.

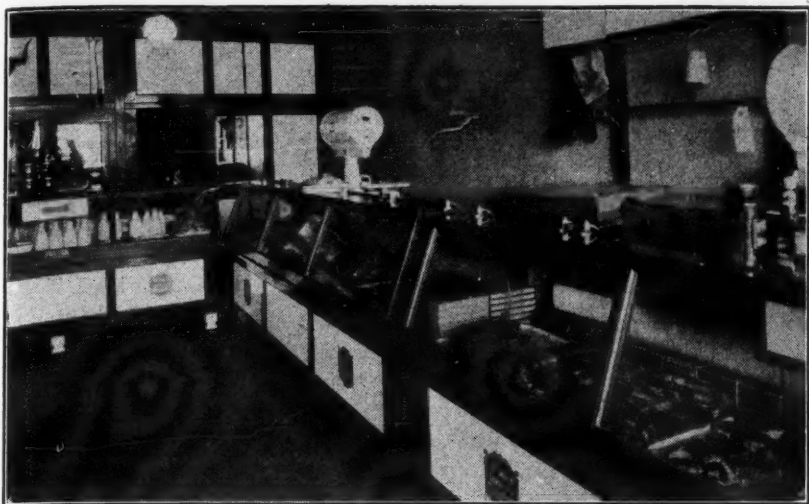
Yours very truly,  
Charles H. Roe.

### Excerpt from "Your Money's Worth"

"To be specific. For the expenditure of about a million dollars, it would be possible to take every current type of motor car made, over a standardized 10,000-mile road test under controlled conditions. (One million dollars is roughly the equivalent of Mr. Ford's output every two hours.) At the close of the experiment, the figures for each make could be published in parallel columns, without comment. Just the cold figures—so many miles per gallon of gas and oil, so many failures of one kind or another per 1,000 miles, so much braking ability from a given speed, so much accelerating capacity, so much tire wear, and so on. Would this help you in choosing your next car? Not if you were buying primarily to make an impression on the neighbors. But if you really wanted to get back of the advertising, the high-powered salesman, the dandy little jiggers on the dash-board, and find out what was the best car for your needs and for your money—it would help tremendously. As the motor car becomes increasingly a utility and decreasingly an emblem of swank, the help to the main body of purchasers would be untold. In the end such a list would set up standards of performing excellence, and force persistently inferior types off the market altogether. For the million-dollar outlay—in a three billion dollar a year industry—who shall say that savings in hundreds of millions would be repaid to the American people?"



## Ligonier Display Cases Refrigerated by Universal Cooler Unit



## NEW YORK ENGINEERS STUDY PROBLEM OF GOOD ILLUMINATION

### A. S. R. E. Members Visit Harrison Lamp Works

The April meeting of the New York section of the American Society of Refrigerating Engineers was held Wednesday evening, April 25th, at the plant of the Harrison Lamp Works, Harrison, New Jersey. Thirty-eight members and guests were present.

Following a 6:30 dinner, President Benis briefly stressed the importance of good lighting before introducing A. F. Loewe, director of the Brooklyn Edison Lighting Institute at Harrison. Following this talk, Mr. Loewe conducted the members through the institute and gave a talk on modern lighting, referring to equipment seen by the visitors during the trip. Particular stress was laid on the importance of factory lighting for increasing production as well as the safety of those employed. Demonstrations were made to show how particular illuminating effects are accomplished.

### Florida Town is One Hundred Per Cent General Electric

There is a little town in Florida called Brighton, situated 35 miles from the nearest settlement. It is in the heart of the Florida Everglades and is practically self-sustaining. It has a swimming pool for the hot days and even a complete zoo, made up of the Florida wild animals.

There is only one electric refrigerator in this town and that's the General Electric. Mr. W. H. Philips, manager of the Domestic Appliance Company of Avon Park, overlooks no prospect and made it a point to cover this town. He "flivvered" over there three times, a round trip of 70 miles, to close his prospect.

### C. A. Collier Elected President of Southeastern Division, N. E. L. A.

Charles A. Collier, vice-president of the Georgia Power Co., Atlanta, Ga., was elected president of the Southeastern division of the National Electric Light Association at the convention held at Miami, Fla., April 11 to 13. The registration exceeded 600 delegates.

### American Chain Buys Wright Manufacturing Co.

The Wright Mfg. Co., Lisbon, Ohio, manufacturers of chain hoists, trolleys and cranes, announces the sale of its business and trade name to the American Chain Co., Inc., with executive offices in Bridgeport, Conn. H. F. Wright and W. F. Wright will continue in charge of sales and production of Wright products.

### Rochester Utility Man Addresses General Electric Dealers.

Robert M. Searle, president of the Rochester Gas & Electric Corp., Rochester, N. Y., recently addressed a gathering of 75 general electric refrigerator dealers operating under the Wheeler Refrigerator Corporation, Rochester, N. Y. Representatives were present from 10 counties at the meeting which opened the Spring and Summer selling campaign.

### E. R. Legg Appointed Kelvinator District Manager in Northwest

Edward R. Legg has recently been appointed Kelvinator district manager of the Northwest, with headquarters at 208 Third avenue, Seattle, to have charge of sales in the states of Washington and Oregon as well as northern Idaho. Mr. Legg was formerly the southern California and Arizona branch manager of the Nizer division of Kelvinator Corporation.

## BRUNSWICK-KROESCHELL MACHINE IN "NO. 1 FIFTH AVENUE BLDG."

In the previous issue of *ELECTRIC REFRIGERATION NEWS*, April 25, pictures of the "Number One Fifth Avenue Building" in New York City were shown on page 8. Mention was made that one hundred Copeland units have been installed in the apartment kitchenettes by the Copeland Refrigeration Co. of New York.

W. O. Whitney, New York sales manager of the Brunswick-Kroeschell Co., 136 Liberty St., New York City, reports that a four-ton Brunswick-Kroeschell carbonic anhydride refrigerating plant has been installed in the basement of this building for use in connection with the restaurant.

### Italian Refrigeration Magazine Received

A copy of *L'Industria Italiana Del Freddo*, an Italian publication issued monthly and devoted mainly to the larger types of commercial refrigeration equipment has been received. The issue dated March 31 contains articles on the preparation and uses of cork insulation, the conservation and pasteurization of milk, a refrigerator analysis, and numerous items of news covering recent happenings in refrigeration circles throughout the world. The magazine is published by Societa Industrie Frigorifere Meridionali, Via Marsala N. 8, Milan, Italy.

### Chicago Frigidaire Distributor Dead

I. K. Stover, distributor for Frigidaire and Delco Light products in Chicago, died early Tuesday morning, April 24, at his home in Wilmette, Ill., following a prolonged illness. At the time of his death, Mr. Stover's organization covered parts of Illinois, Wisconsin, Indiana and Michigan and consisted of more than 600 employees.

### A. J. Deer Co. Starts Production of Commercial Unit

The A. J. Deer Co., Hornell, New York, has recently started production of its commercial electric refrigeration unit. At present only one size machine is being manufactured. S. D. J. Dunlap, who recently joined the company, is in charge of sales and production.

### Tells How to Conduct Refrigeration Teas

"Refrigeration Teas" is the subject of an article by Alice F. Robertson, of the Nebraska Power Co., which appears in the May issue of *Electrical Dealer*. Miss Robertson tells of the success she has had in holding a refrigeration tea each Friday afternoon to which a group of refrigerator owners and prospects is invited.

"Your paper is getting bigger and finer every month and it is difficult to see how the electric refrigeration industry could function without it."—W. C. Moore, advertising manager, General Refrigeration Company, Beloit, Wis.

**THE PRESIDENT HOTEL**  
ON THE BOARDWALK  
ATLANTIC CITY - N. J.

SPLENDID LOCATION  
Each room has Servidor,  
Serving Pantry, Bath  
with sea water. Possesses  
own Swimming Pool and  
Turkish Baths. Concerts  
- Dancing - Golf - Horse-  
back - Roller Chairs.  
Come Now for Relaxa-  
tion and Recreation.

F. L. Andrews  
Manager

## An Excellent Means of Keeping in Touch With the Industry

To All Distributors and Dealers:  
"The *ELECTRIC REFRIGERATION NEWS* issued every other week by the Business News Publishing Co., 554 Macabees Bldg., Detroit, Mich., is commended to all distributors and dealers as an excellent means of keeping in touch with the general activities of the electric refrigeration industry. The publisher will gladly send sample copies upon request. Welsbach Company, Gloucester City, N. J., Refrigeration Division.

## SEVEN OUT OF TEN WIVES FALL SHORT OF IDEAL FOR LACK OF "MAKINGS"

### Good Plumbing, Well Built Kitchens and Labor Saving Devices the Need

Man's chances of getting an ideal wife are only three out of ten, Mrs. Glarengo G. Goodwin, past president of the Illinois Federation of Women's Clubs, has computed.

"American wives fall into five classes," said Mrs. Goodwin addressing a woman's meeting. She divided them as follows:

Home-maker, or "ideal" type.....	30
Jazz, or "can opener" type.....	20
Nagging type .....	15
Drudge type .....	20
Baby doll type .....	15

Most women would turn out to be good homemakers, she said, if they were supplied with the "makings" which she described as "good plumbing, well-built kitchens and labor-saving devices of all sorts."—*Detroit News*.

## COPELAND FACTORY RUNNING FULL TIME DAY AND NIGHT SHIFT

### Plant Capacity Being Doubled for Silica Gel Production

Spring sales are unusually good according to reports from Copeland Products, Inc., Detroit. The factory is operating day and night on a schedule of seven days per week. Property adjoining the present factory has been leased and within the next month the manufacturing facilities will be practically doubled.

The new factory will be used for production of the silica gel machine and will also provide space for a new factory display room. It is expected that the silica gel units will be applied principally to commercial refrigeration. The present distributors and dealers will handle both electric and silica gel equipment.

Copeland has exclusive rights to manufacture and sell all forms of silica gel apparatus except for railroad and steamship applications. The rights for these fields are held by the Safety Car Light & Heat Co., of New York.

Recent additions to the Copeland line have extended the sales possibilities in household, commercial and apartment house fields. Copeland now has three complete household lines consisting of a low-price, a medium-price and a high-priced line. Two sizes of commercial compressors are now offered, the largest having a capacity of 1/4 ton.

Close contact is being maintained with the field organizations, thirty-five territorial meetings having been held during the past few weeks. A total of 3800 dealers and salesmen have attended these meetings. Ten more meetings are scheduled to complete the spring series.

Write for our new 1928 proposition assuring you  
**MORE AND BIGGER SALES**  
with Thesco Display Fixtures  
**The C. SCHMIDT COMPANY**  
John and Livingston Streets  
 Cincinnati, Ohio



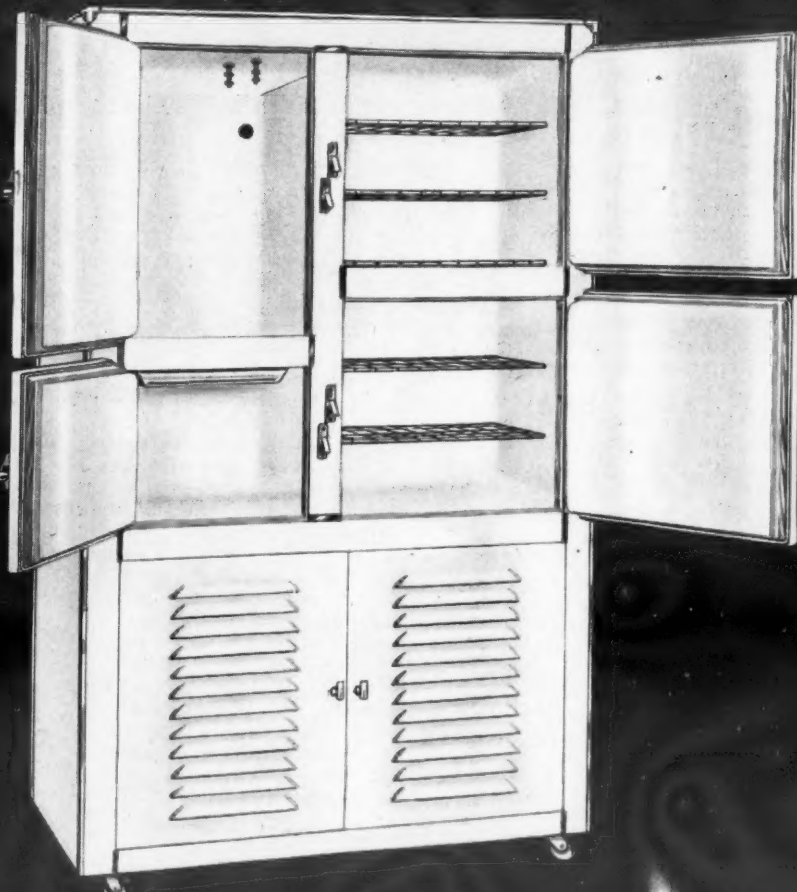
PEERLESS FLOODED TYPE EVAPORATORS

For use on either Methyl Chloride or Sulphur Dioxide.

The PEERLESS one-piece, galvanized casting cooling unit provides the quick freezing advantage of the direct expansion unit with the hold-over advantage of the brine tank. The entire casting is cored, and ice trays are placed directly over the boiling refrigerant, giving an exceptionally short "freezing time."

The entire surface of the unit is "cooling surface," available in maintaining correct refrigerator temperatures at a minimum power cost. Shut-off valves are "flanged" to the float valve assembly, repairs and adjustments are made quickly with no trouble. A large capacity strainer is incorporated between the liquid shut-off valve and the "needle" valve. This can be removed and cleaned without loss of refrigerant. Manufactured in sizes and cube capacities to meet every condition.

**PEERLESS ICE MACHINE CO.**  
515 W. 35th St. CHICAGO, ILL.



Alaska Model No. 1215

Designed and built by specialists whose fifty years of successful experience in the refrigerator field is a guarantee of the most satisfactory and dependable service obtainable from a product specially constructed to meet the needs of the modern electrical refrigerating unit. A full line. New catalog with prices and full details on request.

### The Alaska Refrigerator Company Muskegon, Michigan

BRANCHES			
Philadelphia, Pa.	304 Perry Bldg.	Detroit, Mich.	432 Curtiss Bldg.
New York, N. Y.	206 Lexington Ave.	Minneapolis, Minn.	603 Lumber Exchange
Chicago, Ill.	1508 American Furniture Mart Bldg.	St. Louis, Mo.	2029 Bellevue Ave.
	Dallas, Texas	Santa Fe Furniture Mart	

# ALASKA

**Cork-Board Insulated  
ELECTRIC CABINETS**



## The "Tough Nut" Customer is a Blessing in Disguise

Seattle Firm Says He's Hard to Handle, But Once Sold He's Worth His Weight in Advertising

By Wilfrid Redmond

OCCASIONALLY, if not often, the dealer encounters the Philistine, more familiarly known as the "tough nut."

He "wouldn't buy one of those things in a hundred years. They're still an experiment, an impractical and expensive luxury. Down with 'em."

He has inoculated the entire neighborhood with the virus of sales resistance.

The Arch Electric Co., of Portland, Ore., takes him to its heart like a long lost son who has just rolled in from an over-long diet of husks.

About six months ago this firm, the local distributors for General Electric refrigerators, reached the decision that this type of prospect was worth cultivating.

David M. Williams, the sales manager, was concentrating at that time upon a certain neighborhood in which were located the finest of the city's homes. Entry there promised the greatest sales coup of the year. A prominent figure in the section was an architect, and Williams went after him.

### An Infernal Machine

"I've had three of the infernal things in my house this year," was his greeting to Williams. "Once we were gassed out. On the other two occasions something went wrong while we were away and killed off all our plants. Now go ahead and sell me one."

"How about your wife?" was suggested. "Better lay off her," was the warning. "The factory representative of the last machine we had offered her one for nothing. She told him she wouldn't take it if he put a five-hundred dollar bill in one of the ice trays."

The neighborhood reflected this man's attitude. Apparently he had aired his views in no uncertain manner.

"I can sell you one if you will come down to the salesroom," Williams assured him. "I'll take you up on that," was the challenge.

On the sales floor this man was shown that electric refrigeration, in spite of his experiences, was a perfected device and was so recognized by the government in recommendations to shippers and distributors of foods. This is one of the most successful talking points the firm puts forth. Except in the case of the eighteenth amendment the government is regarded as somewhat of an oracle in the public mind.

### His Sale Brings In Four Others

With his "experiment" myth exploded the "tough nut" accepted a General Electric refrigerator with good grace and within two weeks' time sent in four of his neighbors who seemed convinced that his conversion to the machine was its best recommendation. Since that time the exceptionally stubborn prospect is regarded as a find in the Arch Electric Company's salesroom. Once sold he is worth his weight in advertising.

At present the firm is making an effort to discourage the sale of small refrigerators in families of three or more persons. These purchasers come back within a month without an exception, according to Mr. Williams, and express regret that they did not choose a larger type.

"Unless we take some steps now to make the size of the machine fit the home instead of making the sale for its own sake, we are going to be involved in difficulties akin to those in which the automobile sales people are now floundering," declares Mr. Williams. "The trade-in evil" will be upon us before we know it.

### Men Appreciate Economies of a Large Cabinet

"We have lost several sales recently because we were not over-enthusiastic about

placing small refrigerators in homes where larger machines were more practical. We find that men more readily grasp the idea than their wives, so we aim our campaign at them. Women regard their buy as an experiment. Men have become more familiar with electric refrigeration through their business contacts. The slightly higher cost of a much larger refrigerator appeals to their economic instincts," said Mr. Williams.

There is no easy road to selling electric refrigerators in Portland. The machine must be marketed solely on its merits as a money saver. Food may be exposed to normal temperatures every day in the year without deterioration. Outsiders have the impression that the climate is notoriously damp. But they have only to consult the people who retail complexion aids to learn its true characteristics. The tendency veers from the normal to the dry. Portland rains are not all-day affairs. There are several each day. Their average duration is ten minutes. During each intermission the sun appears and leaves everything dry and sh'p-shape for the next one. In such a climate coolers justify their existence only as cold storage plants. They are not a meal-to-meal necessity.

The cold storage argument figures prominently in every sale. Home-grown fresh fruits and vegetables may be obtained the year round in the Portland markets and quantity buying is encouraged by the use of electric refrigeration. The sales talks take this trend.

### Draw Him a Picture

When "Dave" Williams or his salesmen get the prospect off his feet and quietly seated in a chair for a chat on refrigeration they get busy with a pencil and a scratch pad. No statistics to harass his patience figure in the scribbles. His interest is rather stimulated by illustrations crudely drawn to emphasize each point under discussion.

If he is a party to the popular fallacy that electric refrigeration is still feeling its way along, overcoming mechanical imperfections as they assert themselves, the pencil traces a line diverging slightly from the horizontal to the vertical, representing the first lean years when the machine was on trial. The ascent is gradual until the year 1924 is reached. At this point the prospect will note that the line makes a sharp turn to the vertical. The salesman here stresses the effect federal endorsement of electric refrigeration at production points had upon the public mind. The stimulus given by later recommendations in the wholesale and retail field is likewise graphically portrayed. The chart tells the story more effectively than a dry recital in the language of salesmanship.

### D. B. Henry Joins Copeland Commercial Department

D. B. Henry, formerly in charge of the test laboratories of the Wayne Company at Fort Wayne, Ind., has joined the staff of the Copeland Products, Inc. He will be associated with Henri A. Brysselbout of the commercial refrigeration sales staff in development of commercial business.

## Unique Installation of Kelvinator Commercial Refrigeration Equipment

A Hussman Cooler and two six-foot Weber display cases in Ross' Market, El Paso, Texas, are kept at correct temperatures by the compact refrigeration system shown at the right. The condensing units are placed on the floor, the brine pump and motor above these, and the brine reserve tank on top. Temperature is thermostatically controlled, being hooked in series with the brine pump. The El Paso Electric Co. made the installation



## NEW INSTALLATIONS HERE AND THERE REPORTED TO THE NEWS

E. E. Martin, of the Kelvinator department of the W. R. Gilchrist Co., Clinton, Okla., reports the installation of Kelvinator equipment in the Clinton hospital, consisting of a serum cabinet and water cooling equipment. He has also installed a large market cooler for the M. & S. store of Clinton.

A General Electric refrigerator has been installed in the Sidney, Ohio Elks' Home by Fred F. Shaw, Sidney.

Announcement has been made that complete equipment of forty Springfield, Ohio stores of the E. W. Fulmer Company will be made with Frigidaire electric refrigeration within the next two weeks. Installation of the equipment will be made under the direction of N. M. Wenrick and R. J. Lawrence who closed the deal.

In addition to these installations in Clinton, Mr. Martin reports the sale of a Kelvinator market display counter to Whelchel & Oller, Thomas, Okla.

The contract for installation of Frigidaire equipment in the trainer's cottage and horse stable at Mrs. Helena S. Raskob's "Bully Rock" farm near Centerville, Md., has been awarded to the Sudlersville Supply Co., Sudlersville, Md.

T. B. McKnight Mercantile Co., California, Missouri, has installed a market cooler with Frigidaire equipment.

The Modern Cafe on North Main street, Cleburne, Texas, is installing a Frigidaire equipped cooler and counter cooling equipment.

Kold Stream electrically refrigerated water coolers are to be installed on each floor of the recently remodeled Central National Bank Bldg., St. Petersburg, Florida. These are each self contained units automatically controlled and finished in battleship grey.

Mutual Creamery Co., Portland, Oregon, has recently bought 20 Kelvinator-Nizer ice cream cabinets for the use of its ice cream retailers.

Frigidaire electric refrigeration has been installed in the dark room of the Woods Kodak Shop, Mineral Wells, Texas.

The Thompson Pharmacy, Ft. Dodge, Kansas, has recently installed a new Frigidaire ice cream equipment.

The Brandon apartment, owned by the Nurney Frigidaire equipment—sold by the Virginia Estate, Suffolk, Va., has recently installed Electric and Power Company.

H. R. Lawman, Kelvinator salesman for the Kansas Electric Power Co., Severy, Kansas, has recently sold commercial equipment to P. Ludvickson & Co.; also to J. A. Schroyer.

A Frigidaire system has been installed in the soda fountain of the Hotchkiss Pharmacy at Ansonia, Conn.

The Alva Electric Supply Co., Alva, Oklahoma, will install Frigidaire equipment in the Morris meat market and grocery; also in the DeGeer Market.

Kelvinators are included in the recently completed Shelby apartments, Boylston north and Franklin streets, Seattle.

Eight Kelvinator-Nizer Ice Cream Cabinets were purchased in April by the Royal Ice Cream Co., Tacoma, Washington.

Frye Packing Co., Seattle, largest independent meat packer in the United States, has supplied 14 of its retail markets with meat cases Kelvinator equipped.

Forker's meat market, Castana, Iowa, is now equipped with Frigidaire.

Frigidaire multiple equipment has been installed in the New Green Briar apartment hotel, Milwaukee, Wisconsin.

A York refrigeration plant of two ton capacity has recently been installed in the fruit market owned by Joseph Schiavoni at Greenport, N. Y. The compressor is automatically controlled and the cooler is equipped with glass doors attractively displaying the stock of fruit.

The Onawa Bottling Works, Onawa, Ohio, recently sold Frigidaire to the following: Peterson Bros. Store at Turin, Riley Huff store at Whiting, Walter Rowles, L. D. Bearce, D. C. Fyock store, Budd Moss, John Kelly, A. J. Walker, T. L. Gossard and Fred Ford.

### SHAFT SEALS

THERMOSTATS—FLOATS  
HIGH PRESSURE  
CUT-OUTS

LIGHT  
STAMPINGS

Automatic Controls for  
Refrigeration and  
Oil Burners

GOODNOW & BLAKE MFG. CO.

3840 BEAVER STREET  
DETROIT, MICH.

### AUTOMATIC ELECTRIC CONTROLS NON-DETERIORATING MERCURY SWITCHES

Simple — Dependable  
ABSOLUTE  
ELKHART



Accurate — Safe  
CORPORATION  
INDIANA

### E. T. L. Service for Domestic and Commercial Electric Refrigeration

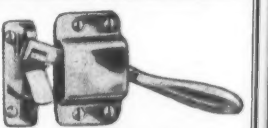
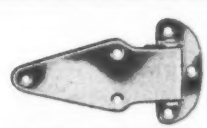
Testing and experimental laboratory service for manufacturer, distributor, central station  
Test data exclusive property of client

ELECTRICAL TESTING LABORATORIES

80th Street and East End Avenue, NEW YORK CITY, N. Y.



Patented—Springless  
Automatic



Patented  
TRIPLOCK

Builders of Distinctive Refrigerator  
Hardware for

## Electric Refrigeration

WINTERS & CRAMPTON MFG. CO.  
GRAND RAPIDS, MICH.

## Juruick REFRIGERATION

—for every commercial requirement

The Juruick is a profitable proposition for dealers who can handle a complete line of refrigeration for every commercial requirement.

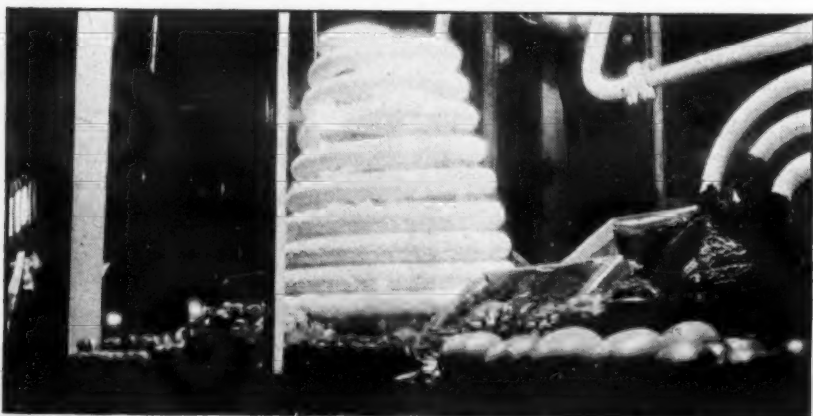
Set the thermostatic control—"turn the switch"—and the Juruick automatically provides just the degree of cold required, day after day at minimum cost. Such is Juruick service.

Desirable territories are still open for responsible dealers

AMERICAN ENGINEERING COMPANY

2403-13 Aramingo Ave., Philadelphia, Pa.

## Florida Grocery Store Uses Frost Coils As Window Display Attraction



The Manhattan Market, St. Petersburg, Fla., finds that foods are pleasingly contrasted against the pure white background of the frost coils. The display of the coils also indicates an investment which has been made to insure the proper preservation of foods sold in the store



## Sells Electric Refrigeration As Unit In Kitchen Ensemble

Colored Mailing Piece Invites Women to Visit Advisory Kitchen in Department Store

**BOSTON STORE**  
*The Heart of Milwaukee*

FEBRUARY Fourth Street and Wisconsin Avenue 1928

For Now It's  
**COLOR**  
in the kitchen

Color has come dancing into the kitchen, bringing charm and cheer, and a new delight in cooking. Let YOUR work shop take on this glad new atmosphere; then the "So this is your kitchen" of the chance guest will express admiration, and the bright saucers will smile understandingly, and the pot, no longer calling the kettle black, will settle down to a delightful domestic peace in its harmonious surroundings.

Everything in Color

Choose your color—that's the first step; then go shopping. What fun to select crisp white curtains with yellow dots, per chance—or green linoleum barred with black and ivory—or a proud broom with a dainty blue handle, just for instance.

Let's paint the Furniture, too

Unpainted chairs, stools, tables, cupboards may be lacquered to match your pots and pans. How slick to paint a sturdy stool a buttery yellow—or a tiny hanging cupboard, a daring red. Such marvelous possibilities there are in paint and lacquer, and a wide selection of unpainted pieces to make your choice from here.

CAKE COVER 85c  
ELECTRIC TOASTER \$5.48  
DIP COFFEE POT \$4  
TEA KETTLE \$3.30  
CUTLERY SET \$4.25  
FAMILY SCALE \$2.50  
Fifth Floor, North

W. J. Burke, buyer for the housewares department of the Boston Store, Milwaukee, has aroused a great deal of interest in housewares, including electric refrigerators, by issuing a small one page pamphlet each month illustrating the use of color in the home kitchen.

In the pamphlet, reproduced in the accompanying cuts, the copy stresses very highly the way color can be used to make a kitchen more bright and attractive. The response that it has elicited from housewives has been very gratifying. They go up to the fifth floor where the housewares department is located to look over these new objects and consequently buy.

Electric refrigerators play a very important part in connection with this merchandising scheme. They are prominently displayed at the head of the housewares department so that anyone in that part of

the floor can see them at once. The Boston Store has an advisory kitchen in the housewares department which is under the direction of a very capable woman who demonstrates and explains the use of the articles attractively displayed there. An electric refrigerator is, of course, included in the kitchen equipment.

As hundreds of housewives see this kitchen every day and inspect the articles in it, it has been found to be a very profitable venture not alone for the sale of electric refrigerators, but for all other articles of houseware that can be distributed in it.

Mr. Burke finds that a wide distribution of these four-color pamphlets to Milwaukee homes is bringing very good results, and the firm is planning to continue them from month to month. According to Mr. Burke, it is better to advertise one each of articles that go well together in a kitchen

than to advertise many articles of the same type on a page. One electric refrigerator, one toaster, one scale, and a few other articles of a different nature will suggest to a housewife just what she needs for her kitchen to make it more modern and attractive.

Usually the way to sell electric refrigerators is to sell them on their merit alone as an individual unit. In the houseware department of the Boston Store, however, they are sold in a different way. The customers are shown electric refrigerators as a part of the kitchen ensemble. By this method of harmonizing all the articles in the houseware department a stronger appeal is made for each unit displayed. Mr. Burke has worked up a fine volume of business through this plan.

### SALESMEN OF COMMERCIAL EQUIPMENT TAKE NOTE

If your salesmen are calling on merchants, here are some facts that may guide them in making their calls more opportune. The facts are based on a survey made by the Domestic Distribution Department of the Chamber of Commerce of the United States. In small towns, from 2,500 to 10,000 population, the percentage of sales made before eleven o'clock in the morning is placed at 32 per cent; between eleven and three, 8 per cent; and after three o'clock, 60 per cent.

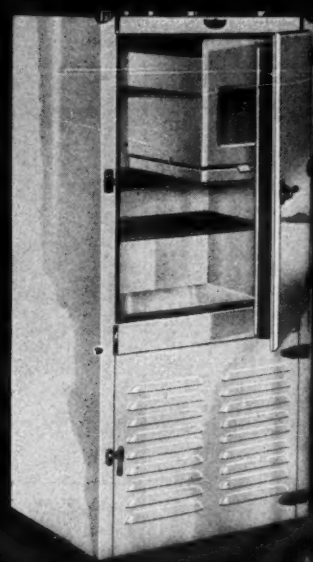
In towns from 10,000 to 50,000 population, 15 per cent of sales are made before eleven o'clock, 13 per cent between eleven and three, and 72 per cent after three o'clock.

In towns of from 50,000 to 200,000 population, 2 per cent of sales are made before eleven o'clock, 51 per cent between eleven and three and 47 per cent after three o'clock.

In cities over 200,000, 4 per cent of the sales are made before eleven o'clock, 71 per cent from eleven o'clock to three o'clock and 25 per cent after three o'clock.

—The Anchor.

### AMERICA'S MOST BEAUTIFUL REFRIGERATOR



MODEL G-1

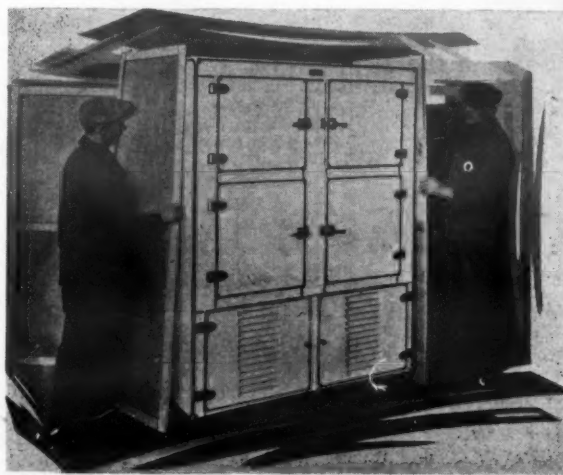
Rhineland Airtite Refrigerators are built to accommodate any Standard Electric Unit. These cabinets sell easily because they combine correct construction with rare beauty. Write for prices and information on how you can increase your sales and profits by handling Rhineland Airtites.

Rhineland Refrigerator Co., Rhineland, Wis.

## ATLAS Refrigerator Cases

*A few parts quickly assembled into strong, safe containers—economical containers*

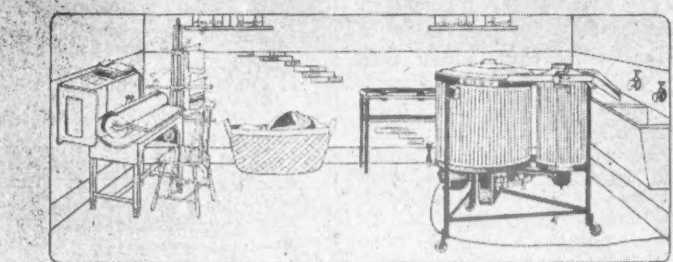
Refrigerator manufacturers have proved that one of the surest ways of putting their shipping department on an economy basis is to pack and ship their refrigerators—refrigerators of practically any type or size—in Atlas Refrigerator Cases. Packing refrigerators in Atlas Cases is so much easier—so much simpler than the old style crating method, saving both time and labor. Dealers and agents prefer Atlas Cases because they deliver the refrigerators in Al condition and save them freight in the bargain. Make your next shipment in convenient and economical Atlas Refrigerator Cases.



1880

**Atlas Packing Cases**  
CARRY THE WEIGHT—SAVE FREIGHT  
ATLAS PLYWOOD CORPORATION

Park Square Bldg. Boston, Mass.  
New York Office - 90 West Broadway  
Chicago Office - 649 McCormick Building



## THE MODEL LAUNDRY

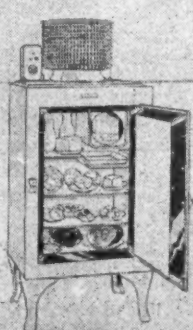
Can be equipped completely on the fifth floor

### CONLON IRONERS

This snow white lacquer finished ironer is at first sight a kitchen table; when opened it is a compact and competent ironer—ready for any kind of ironing or pressing. It is easy to operate, for a light touch of the finger or knee immediately starts or stops the ironing mechanism. The thirty-inch open-end roll irons everything—large or small.

Price \$165. Easy Terms.

### General Electric REFRIGERATORS



Just place a General Electric Refrigerator in your kitchen, plug it in the electric outlet and your refrigeration problems for both winter and summer are solved. No need to worry when we have a week of California weather in the middle of winter. Refrigerator, illustrated, \$310 completely installed. Others at \$280 to \$475.

TRY THIS DRESSING the next time you serve fruit salad. Blend a package of cream cheese with a small glass of your favorite flavor of jelly, mix with a stiffly beaten cream and chill. It has a piquant flavor that guests will declare DELICIOUS.

### EASY WASHER

All that its name implies—an efficient laundry machine that lightens Monday's tasks. No more wringing—the marvelous new drying tub whisks out all the water in three minutes. No pail of water to empty—the washer empties itself down your sink or set tub. The new Easy is simplicity itself—to operate all you do is press a button—move a lever. However, to fully appreciate this machine, you must see it operate. New—white Duco triple coated.

Price \$175. Easy Terms.

### YOUR SERVANT

Generally speaking electricity is the cheapest servant you can employ. It will lighten many household tasks and will do them more quickly. Our Budget Payment Plan makes it easy to summon one or more electrical servants to your home.

Now on!

Midwinter Home Furnishing SALES

**BOSTON STORE**  
*The Heart of Milwaukee*



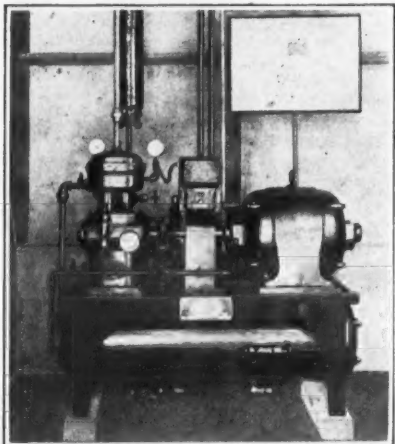
## FRICK DIRECT DRIVE 1-H. P. UNIT FOR SMALL COMMERCIAL NEEDS

The Frick direct drive refrigerating unit shown here is designed to meet the needs of restaurants, small hotel, flower shops and similar applications. It is manufactured by the Frick Co., Waynesboro, Pa.

The compressor is of the vertical type with two cylinders, the cylinder heads being entirely covered by the water jacket. The compressor is operated on a 1 H. P. motor, controlled either automatically or by hand as desired.

The condenser has straight tubes, easily cleaned, carrying cooling water. The tubes are wound with spiral fins to facilitate the transfer of heat, and an automatic water regulating valve is standard equipment.

The cooling coils are designed to suit the individual installation, either brine or



Frick 1-H. P. Machine

direct ammonia systems being used as required by the particular conditions at hand.

Safety relief valves are provided on both condenser and compressor discharging into the low pressure side of the system. A contact switch on the pressure gauge shuts off the motor in case of excessive pressure.

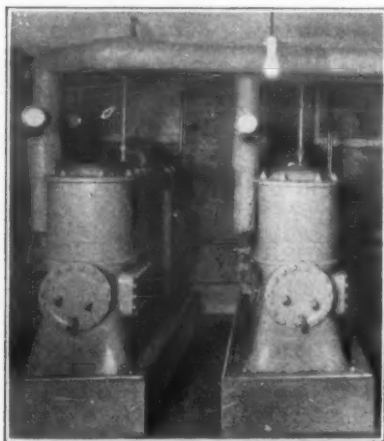
The close-up view of the compressor shown here was taken in Zerr's Market, Reading, Pennsylvania, where this unit cools a large market cooler and a display counter. The owners of this store since purchasing this unit have placed orders for over 75 additional machines for other markets in their chain, according to the manufacturers.

## PEERLESS ADDS METHYL-CHLORIDE MACHINE TO LINE

The Peerless Ice Machine Co., 515 West 35th St., Chicago, Ill., has a line of automatic refrigerating machines ranging in capacity from 1 to 10 tons. This company has lately placed on the market a direct expansion system using methyl chloride, this system being supplementary to the line of automatic brine circulating systems previously available.

This latest development is now being installed in apartment buildings up to 18 stories in height. The compressor is water cooled and constructed along the same lines incorporated in the larger machines which have been manufactured by the Peerless Company for the past 15 years.

The Peerless cooling unit designed for use with this compressor is a one piece, semi-steel casting containing a float valve, screen and shut-off valves. This casting is cored throughout permitting the methyl chloride to boil off on three sides of the



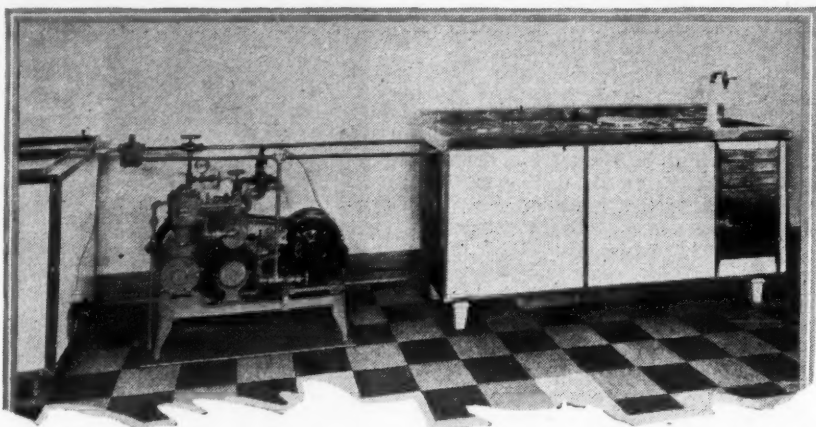
Typical Peerless Machine Room Duplex System

ice cube tray. The weight of the casting and the liquid methyl chloride carried in it, act as a hold over when the machine is not in operation. According to the manufacturer, ice cubes are frozen in from an hour to an hour and a-half.

### Truthful If a Bum

Tramp—Lady, could you give me something to eat?  
Lady—My good man, have you no work?  
Tramp—Kind lady, I am an artist.  
Lady—What do you do in Art?  
Tramp—Kind lady, I make house-to-house canvasses.—Phoenix.

## Dole Ammonia Machine for Commercial Uses is Water Cooled and has Thermostat Control



Small Dole compressor connected with two coolers in the Dole Refrigerating Machine Company's display room in Chicago

## CLIMAX OFFERS BOTH METHYL CHLORIDE AND AMMONIA COMPRESSORS

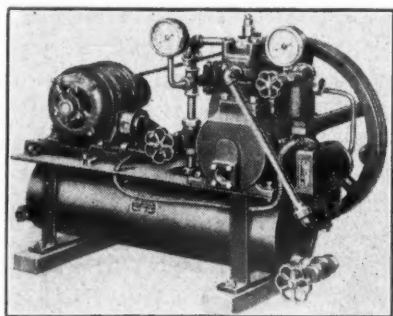
Climax electric refrigeration equipment manufactured by the Climax Electrical Refrigeration Company, Clinton, Iowa, is available in sizes ranging from the model "G" machine with a capacity of 75 pounds ice melting effect to the model "A" machine with 4 ton capacity. The model "G" unit has one-eighth horse power motor, uses methyl chloride as a refrigerant.

Three other methyl chloride machines with capacities of 150, 300 and 500 pounds ice melting effect respectively are available. All of these units have rotary compressors, are direct driven, air cooled, and have radiator type condensers, mounted in the base.

Climax machines using ammonia as a refrigerant are offered in capacities ranging from one-half ton to four tons. Of the four machines in the ammonia line, the two smaller ones have direct driven rotary compressors while the two larger machines have belt driven reciprocating compressors. The construction of the reciprocating models is of interest in that the usual connecting rod has been entirely eliminated together with the piston pin. The piston is actuated in a perpendicular direction.

## HOWE ANNOUNCES NEW ONE-HALF TON SELF CONTAINED UNIT

Howe refrigerating machines, manufactured by the Howe Ice Machine Company, Chicago, Illinois, are made in capacities ranging from one-half to 200 tons;



Howe One-Half Ton Machine

from the self-contained units for small systems used in meat markets, groceries, restaurants and such applications to the very large plants in dairies, cold storage houses and ice cream factories.

The compressor shown here is one with a capacity of one-half to three-quarter ton and has recently been added to the line of Howe machines. This machine has a 2-cyl. compressor attached to a 1-H. P. motor by a V-belt. The compressor has a 2 inch bore and 2 inch stroke. Standard equipment with this model is an extra large condenser, a pressure gauge, suction strainer, combination condenser water control and high pressure cut, automatic across-the-line starting switch, automatic expansion valve with scale strap and a mercury type room thermostat.

## DISTRIBUTION OF ISKO MACHINES TO HAVE NATIONAL SCOPE

The Electro Vacuum Refrigerator Co., Inc., 202 East 43rd St., New York City, manufacturing Isko commercial refrigeration equipment offers sulphur dioxide compressors in refrigerating capacities for 24 hours of from 200 to 4000 pounds.

In merchandising the Isko machine, no standard f. o. b. price to the general public is advertised. The distributor uses his own discretion in deciding upon the retail price. This policy has been decided upon in order to prevent placing the distributor with a high overhead in

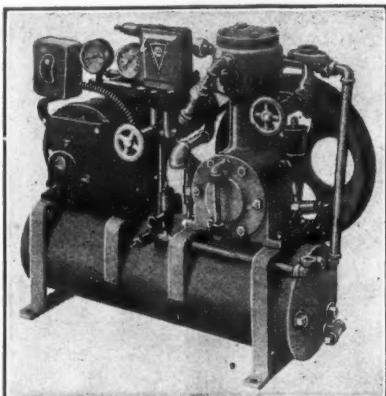
the same class with one who has very little marketing expense. It will permit the distributor to change the sales prices of his equipment when necessary.

The manufacturer feels that this line should be a welcome addition to the distributors of small domestic machines who at the present are compelled to rely upon the sale of their household units exclusively. The addition of the commercial equipment will enable the dealer to cover a much larger field of refrigeration equipment sales.

Arrangements are being made at present for increasing the output of Isko machines and it is expected that within the next 90 days a production program sufficient to take care of national requirements will be in effect.

## SIX SELF-CONTAINED AMMONIA MACHINES IN ARMSTRONG LINE

The smallest, self-contained, full automatic ammonia compressor, manufactured by the Armstrong Machinery Co., Inc., Spokane, Washington, is shown in the



Armstrong Self-contained Unit with One-half H. P. Motor

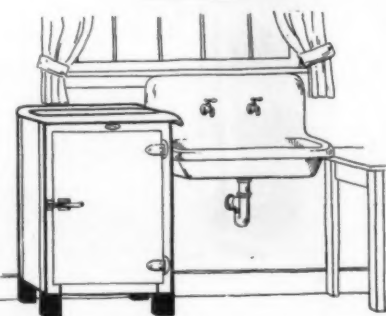
accompanying illustration. This unit is designed to produce adequate refrigeration for small meat markets, groceries, restaurants and similar commercial installations. It will handle a cold storage room of from 600 to 800 cu. ft. or a smaller room and one or two display cases. This model is 31 in. long, 16 in. wide and 26 in. high, and is powered with a 1/2 H. P. motor.

The machine is equipped with a room or a brine tank thermostat, automatic ammonia expansion valve, automatic water pressure regulator and electric motor switch.

This unit is one of six self-contained models manufactured by the Armstrong Company. In addition to these self-contained units, this company offers a line of compressors of the non-self-contained type for the heavier commercial applications.

All Armstrong compressors use ammonia as a refrigerant and are water cooled.

## RHINELANDER OFFERS NEW MINIATURE CABINET FOR REMOTE INSTALLATIONS



The Rhineland Refrigerator Co., Rhineland, Wis. has brought a miniature model refrigerator for remote control installations.

This cabinet is obviously for use where economy of space is necessary. Its total height is thirty-six inches.

Removable de-frosting pan, gasketed doors and hangar bolts are standard equipment.

## THREE POINTS CITED AS ESSENTIALS IN GOOD CABINET CONSTRUCTION

Seamless Sanitary Lining, Good Insulation and Structural Strength Are Vital

Refrigeration whether by means of ice or a mechanical unit is dependent upon a cabinet that combines structural strength, insulation and a sanitary lining. Other factors of course enter in, but may be considered as secondary to these three essentials. A seamless sanitary lining enclosed in insulation of low heat conductivity and firmly set in on a strong cabinet, will keep a low interior temperature. More than mere low temperature is refrigeration—which means an even cold air constantly in circulation, plus a fair amount of humidity to prevent dehydration.

A seamless lining of stone has been developed by the Arlington Refrigerator Company, of Arlington, Vermont, known as Arcostone. This material resembles blue stone in its texture and hardness, and is cast in a plastic form by troweling. The entire lining of the cabinet is made of 1/2 inch stone in the form of a casting and is reinforced with 1/4 inch mesh galvanized wire. This wire reinforcement secures the stone lining to a wall of 1/2 inch celotex, the latter material being both an insulator as well as a moisture deterrent. To the outer wall of the celotex is applied a solid mass of corkboard 3/4 inch to 1 1/2 inches thick, depending on the size of the cabinet. As important an insulator as is corkboard, equally important is the application of corkboard to the cabinet. By cutting the slabs of corkboard in large sections to exactly fit the panels, backs, doors, tops and bottoms, many seams are eliminated and heat leakage thus reduced to a minimum.

Overlapping of both corkboard and celotex walls at the corners insures a positive enclosure of insulation and whenever a joint is necessary, a seal is obtained with a waterproof cement.

Finally the exterior is assembled and here enters the factor of structural strength. By means of corner block construction both at top and bottom, a firm and strong cabinet is produced. The front stile and back is then drawn together against the central baffle plate with heavy bolts rendering a tightly joined cabinet firm in all its parts; solid piano ends of hardwood stock are used and by means of a caster shoe construction and bottom strut the cabinet is tied end to end and is thus able to support the interior with entire security.

While the lining of this cabinet is stone, the weight of the cabinet is only 25 per cent greater than a refrigerator with porcelain lining. A high lustre white is produced on this stone lining, rendering a brilliant, clean interior. The stone lining quickly chills and retains cold, so to speak, long after the ice is melted away. For the application of mechanical refrigeration to this cabinet, bolts have been set in the cooling chamber ready for the installation of the unit.

## NEW MILK COOLER DESIGN MAKES SERVICING EASY FOR THE DEALER

Farmer Can Lift Out Unit and Bring to Town for Overhauling

The Haven Mfg. Co., Milwaukee, Wis., has developed a new unit for farm milk cooling that has a number of interesting features.

The outstanding feature, aside from the design of the compressor, is the fact that the dealer does not have to drive miles out into the country to service the unit, in case the need for service should ever arise. The installation is such that when necessary the farmer-owner himself can lift out the unit, bring it to town to the dealer for checking up, and reinstall the unit without the dealer's help. There are no pipes to disconnect—simply disconnect electric terminals and lift the unit out of the cooling tank.

The compressor, condenser and cooling units are all mounted on a single board, as an integral unit. The compressor unit is fastened on top of the board and the cooling unit is attached to the under side. This constitutes the complete refrigeration system.

The board is laid across the center of a suitable tank. The cooling unit is submerged in water in the tank and freezes a block of ice in the center of the tank, which is said to maintain a sufficiently low temperature for thoroughly satisfactory milk cooling.

The Haven farm milk cooling system is furnished with or without tank, as desired. The standard tank that is supplied with the unit will cool four ten-gallon cans of milk at a milking or 8 cans per day of 24 hours.

In addition to farm milk cooling units, the Haven company also manufactures a complete line of electric refrigerators for household and commercial use.

"We look forward to ELECTRIC REFRIGERATION NEWS issues with a great deal of anticipation. It is a wonderful medium of information for us." D. E. Hicks, Good Housekeeping Shop, Youngstown, O.

## DRINKING WATER FAUCETS

for  
Refrigerators - Water Coolers  
Cordley & Hayes  
1 Leonard St. New York City

## LIGONIER Refrigerators

Give your Electrical REFRIGERATION Units a Chance to Prove their Quality!

A Complete Line of Commercial Refrigerators... Counters and Market Coolers.

LIGONIER REFRIGERATOR COMPANY  
100 CAVIN ST.  
LIGONIER, INDIANA.

## WAGNER MOTORS FOR ELECTRIC REFRIGERATION

Wagner Small Motors meet the refrigeration standard—mechanically quiet—built to close tolerances. Available in ratings from 1/2-hp. to 1 1/2-hp.

TEN PROMINENT USERS  
Frigidaire Corp. U. S. Air Compressor Co.  
Kelvinator Corp. Duro Pump Co.  
Universal Cooler Preferred Oil Burners, Inc.  
Iron Mountain Co. National Refrigeration Corp.  
Merchant & Evans American Blower Co.



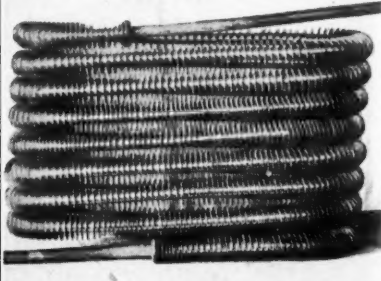
WAGNER ELECTRIC CORPORATION  
6400 Plymouth Avenue St. Louis U. S. A.

## VALVES KEROTEST

FORGED BRASS VALVES  
for Mechanical Refrigeration

Quality Shut-off and Cylinder valves in any standard designs or to your specifications.

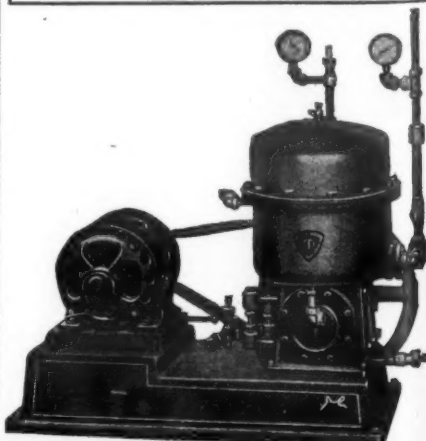
KEROTEST MANUFACTURING CO.  
2525 LIBERTY AVENUE  
PITTSBURGH, PENNA.



## ROME CONDENSERS

are formed in any shape of one piece of seamless copper tubing, fitted with heavy gauge copper radiating fin. Rome condensers are five times as efficient as plain tubes

Rome-Turney Radiator Company  
ROME, N. Y.



## CP Refrigeration

Self-Contained Units from 500 pounds to 4 tons ice melting capacity. Ammonia or methyl chloride refrigerant.

Over 30 years in the refrigerating machine business. We invite the live wire dealer who seeks to build a permanent business to get in touch with us.

THE CREAMERY PACKAGE MFG. COMPANY  
1243 West Washington Blvd. Chicago, Ill.



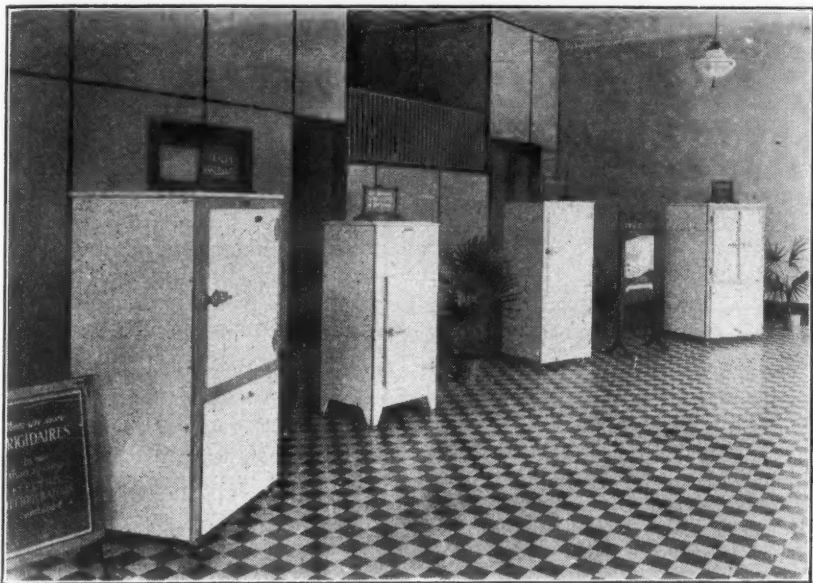
# Kinks in Human Nature That Help Make the Sale

Alabama Dealer Tells of Planned Approach Which Has Proved Successful in Small Towns

By Archie Richardson

THERE are many little kinks in human nature which, judiciously used, will many times put over a sale that could not be made otherwise, George C. Faucett and his salesmen have found in their task of selling the people of Tuscaloosa, Alabama, on electric refrigeration.

And taking advantage of these and other aids big and little that they come across, has enabled the Faucett organization to double its sales every year since 1921, when they first introduced the electric refrigerator to the people of their town, and to build business to the point where it requires



Display room of George C. Faucett, Frigidaire dealer, Tuscaloosa, Alabama

eight salesmen to handle the volume that has been developed in a town of little more than fifteen thousand people.

For instance, many Tuscaloosa homes that have electric refrigeration would still be dependent on the ice box but for woman's inborn desire to appear to best advantage in the eyes of her husband, and to tell him something that she knows will interest him and that he didn't know before. The Faucett salesmen are trained to play to this little phase of woman's nature, and in making the first visit to the home, much of what they have to say to the housewife is intended as much for the husband's ear as her own.

## The Temperature Test

Going into a home, the salesman asks first to see the refrigerator in use. Taking a thermometer from his pocket, he puts it on one of the shelves with the food and closes the door for a few minutes. In the meantime he explains to the now interested woman that most ice boxes are very inefficient and will not even keep the temperature down to fifty degrees, the point at which incubation sets in. Then he goes on to explain that such a refrigerator will not preserve food and is a menace to the health of the family, diplomatically mentioning that a thermometer put into an electrically operated refrigerator will always show the temperature safely below the fifty mark and that such an outfit will preserve the most perishable foods for weeks and even months.

After the woman is made to understand what he is driving at—particular emphasis is laid on the fact that poor refrigeration is unsanitary and a menace to the health of the family—he takes out the thermometer and finds that it reads fifty-five degrees or higher. That speaks for itself, so far as the woman is concerned.

This is generally the psychological moment to ask the woman for permission to call on her husband and take up the matter of refrigeration with him, and it is rarely refused.

Before leaving the home, the salesman gets some data about the size of the family, the amount of ice used and its cost, and he may ask whether there had recently been any illness in the family that might possibly have been due to foods that had not been properly preserved in the refrigerator. And on leaving he hands the housewife some literature which he expects her to look over in preparation for her interview with her husband when he comes home from business that night.

Within forty-eight hours the salesman goes to see the husband. He knows that his wife will in the meantime have convinced him that an electric refrigerator is a very desirable thing to have in the home, and that the matter of money is the only thing that stands in the way of a sale.

He has, however, come prepared to fight it on this line. He knows that a kink of man-nature is a desire for facts, clearly, briefly, and convincingly stated, and he has them. He briefly shows his prospect that what he is spending for ice will pay for the current and upkeep of the refrigerator and will in a few years pay for the machine itself, making its purchase a saving rather than an expense; reminding him that the electric machine gives added protection to the health of the family, avoids

the daily annoyances in connection with the coming of the ice man, gives larger space for the storage of food than will the refrigerator in use, and has many advantages over ice refrigeration and no disadvantages.

Mark Twain laid down the principle that the easiest way to make a man want something is to make it appear hard to get, and following out this idea has made many a sale that might otherwise have been lost.

Faucett carries a large stock of refrigerators and can generally make the installation immediately, but it is sometimes a bad policy to let the prospect know this. It makes the product appear too easy to get. Often it is preferable to make him think of the electric refrigerator as something that everybody wants and that everybody who can afford it is trying to get.

"When a man becomes interested in buying, he wants to know how soon he can get delivery," said J. W. Perdue, the sales manager. "Or it may be that he wants it for his wife's birthday and asks us if we can make delivery on a certain date. If we tell him of the stock we carry and that we are prepared to make delivery at any time, he decides there is no hurry and lets the matter slide. The chances are that he will in the meantime decide to give his wife an automobile or something else this birthday and get the refrigerator later. But if he is told that we will make every effort to get a machine for delivery on his wife's birthday, it will often be possible to get him to sign the order at once and make a twenty-five dollars cash deposit."

## Four Steps in Making the Sale

There are generally four steps in making the sale:

1. The salesman's visit to the home, when he seeks to interest the housewife and get data of the family's refrigeration needs. This call is often arranged by telephone.
2. The visit to the office or place of business of the man of the home.
3. The follow-up which continues until the prospect buys an electric or it is decided that he is not a worthwhile prospect. Sales literature is sent at regular intervals, to fit the case, and a salesman calls on him frequently.
4. The prospect's visit to the display room for the purpose of making his selection.

"We know in advance what he is going to select," said Mr. Perdue. "At the outset we made a study of his needs and decided which outfit he should have, and have worked all along with a view to selling him that particular job. But the selection is left entirely up to him after we have shown him the several sizes and types we handle, and he is given no intimation that his selection is just what we have been trying all along to sell him."

"There are three big factors in closing the sale, as follows:

- "1. The display room and the impression it makes on the prospect.
- "2. The courtesy and desire to serve which he finds on his visit to the display room.
- "3. The demonstration."

"Each of these factors we rate about

You have to take many extra steps—if your refrigerator has been placed where it is convenient for the iceman, but where it is out of the way for you. Why not have a Frigidaire located where it will be handy for you? You will not need to take ice any more and you will save many steps each day, when you have Frigidaire placed convenient to the work table and other points in the kitchen. Investigate new, low prices on Frigidaire, and our time-payment plan. A card or phone call will bring someone with complete information. Very truly yours,

A letter used by G. C. Faucett in Tuscaloosa, Alabama.

thirty per cent. Miscellaneous influences make up the other ten per cent."

The Faucett organization has been particularly successful in selling in small towns, such as those around five hundred population, that have poor and expensive ice service and often poorer ice. Most of these towns have their ice shipped in, and when anything goes wrong the people have to do without ice. Most of the small towns in the Tuscaloosa section, however, have electric service as good as that enjoyed by the people of the cities and at the same rates, and both economy and convenience dictate the purchase of electric refrigerators. Even the negro population is furnishing a good number of buyers.

A salesman who visited a neighboring town of 500 population recently found twenty-six good prospects, despite the fact that most of the residents were small farmers, saw mill workers, and negroes.

"Our electric refrigerator sales have gone far beyond our expectations," said Mr. Perdue. "And it looks like we are just getting started. Each sale we make sells an average of two others to the friends and neighbors of the buyer."

"My prediction is that within five or six years so many Tuscaloosans will be using electric refrigerators that the ice people will find it unprofitable to send out their delivery wagons."

## JOHNSTOWN, PA., TO HAVE ELECTRIC REFRIGERATION EXHIBITION, MAY 14-19

An electric refrigeration exhibition will be held in Johnstown, Pa., during the week beginning May 14. Local dealers for Copeland, ElectrICE, Frigidaire, General Electric and Kelvinator electric refrigerators will participate in co-operation with the Associated Gas and Electric System of Johnstown.

Lectures will be given each day and evening under the direction of Avis R. Broadhurst, home service director of the utility company. Invitations have been extended to the 22,500 electric service customers. Arrangements have been made for the domestic science classes of the local schools to attend in a body. S. N. Clarkson, of the National Electrical Manufacturers Association, will address the group Thursday afternoon and evening, May 17.

## WILL HAVE NEW PLYMETL ASSEMBLY PLANT IN DETROIT

Fred Allison, Francis Palms Building, Detroit, Mich. has closed a franchise with the Haskellite Mfg. Corp., Chicago, for a Plymetl refrigerator assembly plant in the Detroit territory. Mr. Allison perfected the Allison unit and will produce electric refrigerator cabinets, water coolers, ice cabinets and ice boxes all of Plymetl construction.

"We have just received the last copy of your wonderful publication. It is with a feeling of expectation that we await the arrival of this paper as we always know there is going to be something good in it." E. E. Martin, Kelvinator Department, W. R. Gilchrist Co., 709 Frisco Ave., Clinton, Okla.

## ARTIFICIAL FOODS

Endorsed By  
General Electric Co.  
Copeland Sales Co.  
Trutulife Wax Products Co.  
27 Erie St., Milwaukee, Wis.

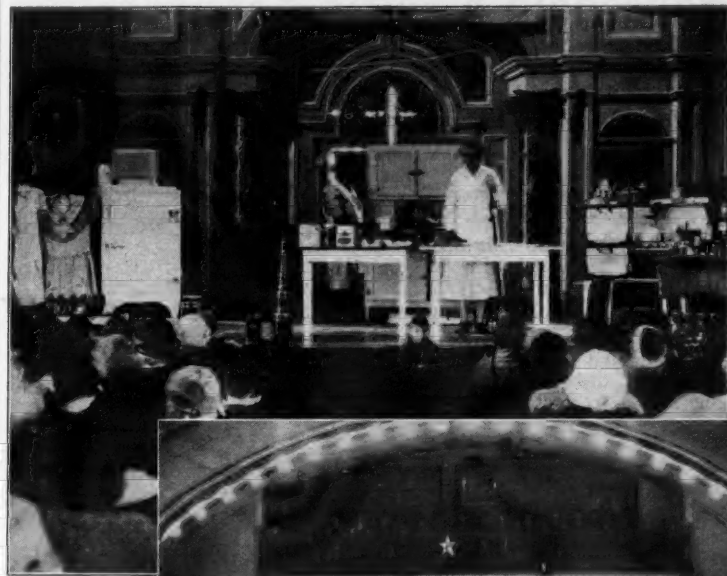
LEADING Refrigerator manufacturers use Monel Metal screws with Monel Metal trim.

Write for details to  
The International Nickel Company (Inc.)  
67 Wall Street  
New York, N. Y.

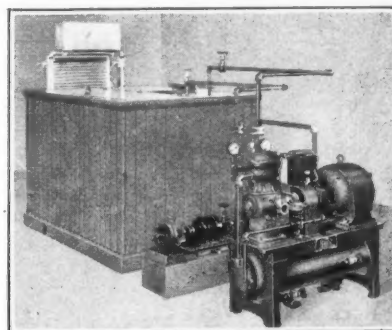
**MONEL METAL**

**NORTHEY**  
REFRIGERATOR  
FOR ALL PURPOSES  
ANY SIZE, STYLE OR FINISH  
REFRIGERATED DISPLAY CASES  
**NORTHEY MFG. CO.**  
WATERLOO, IOWA  
AGENCIES IN MOST LARGE CITIES  
WATERLOO DIRECT TO YOU

## Ft. Smith, Ark., Cooking School Proves Good Prospect Getter for G. E. Dealer



The photograph above shows Mrs. Brown-Lewers, domestic science expert, conducting a cooking school at Ft. Smith, Arkansas. The Arkoma Company of Ft. Smith found that the use of a General Electric refrigerator on the stage brought them many prospects



Farm Unit

Meet the growing demand for milk cooling equipment with this Dairy Farm Refrigerating Plant.

Brine tank stores up refrigeration from small machine. Cabinet has space for holding cans

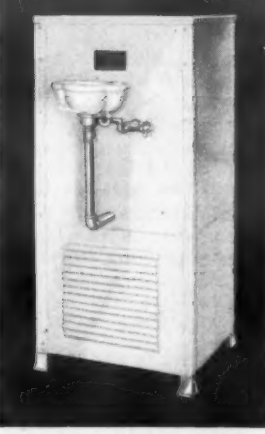
## Refrigeration for Dairy Farms

of evening's milk. Makes 100 lbs. of ice or more, per day, if desired. Built in several styles, and of any required capacity.

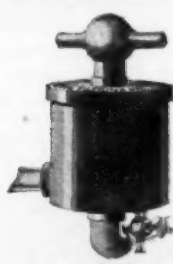
Write for bulletins and full details now.

**Frick Company**  
WAYNESBURG, PA., U.S.A.  
ICE MACHINERY SUPERIOR SINCE 1882

## Now...the Cooler that meets Peak demands with an economy of operation that makes it Outstanding



Model No. 1A, with Filter-Bubbler



No. 3 FILTER  
is sold at its unusually low price because of volume production.

Build permanent sales—with this dependable, reserve-capacity Cooler

DESIGNED for large capacity—planned for economical operation and maintenance—built for permanent satisfaction by a house famous as specialists in drinking water equipment.

Model No. 1A, illustrated, is a handsome self-contained type, finished in white or grey lacquer suitable for use with any standard compressor unit and Filtrine filter... both known throughout the country for dependable, lasting efficiency. Fitted with Halsey Taylor Automatic Bubbler—all materials are the very finest—insulated with 4" pure corkboard—with a special outlet at the back for chilled water for use with remote fountains, replacing the cumbersome and expensive circulating systems at far less cost.

Here is a model which combines every feature of every other make—and many more! A model you can sell with profit—and with confident assurance that it will stay sold! Write today for the attractive details of this complete and profitable line.

Capacity 25 to 220 gallons per 2 hour peak

DEALERS: Write for attractive proposition on our complete line.

**The FILTRINE**  
MANUFACTURING CO.  
49 Lexington Ave. Brooklyn, N. Y.  
Manufacturers of Coolers and Filters of All Sizes



## The Progress and Future of Household Electric Refrigeration

National Advertising Has Educated the Public to Know the Standards of Good Refrigeration

An Address by John D. Cassidy, Retail Sales Manager, Kelvinator Sales Corp., New York City, before the New York Section, American Society of Refrigerating Engineers March 21, 1928

If we were to assemble in one group, one hundred users of electric refrigeration, picked at random, and if we were to ask them what they thought of the product, we would receive such replies as "great," "wonderful," "a tremendous time saver," "a real economy," "the most valuable appliance in my home" and many other enthusiastic responses.

It is indeed very gratifying to those of us in the business to observe the opinion of users. I do not believe that in my own experience in the household refrigeration field I have ever come in contact with a user of a good standard electric refrigerator who had begrudged the price he has paid. He has felt that the price he has paid is small in comparison with the service being rendered.

It is on this solid foundation of economic need that the electric refrigeration business is being built.

Let us go back for a moment to ten years ago. What do we find? The American housewife almost wholly unaware of the advantages of electric refrigeration, with a few small manufacturers striving for existence.

Today the subject is on everyone's tongue and the manufacturer of household electric refrigeration plays an important part in American industry.

The growth of our own organization is typical of the growth of the other leaders in the industry. To graphically illustrate this, let me call your attention to the fact that in 1927 Kelvinator did more business than in the thirteen years immediately preceding.

When electric refrigeration was first introduced in the American home the manufacture of units was confined almost exclusively to units for existing cabinets; in other words, we were concentrating our efforts on producing refrigerating machines to fit the ordinary, every-day ice box. Five or six years ago the first self-

contained cabinet was introduced. The popularity of this increased so rapidly that today a very large percentage of electric refrigerating units is sold this way with the cabinet and machine all one unit.

A few years ago the American public had a very poor conception of the value of a well built and adequately insulated refrigerator. Today advertising has changed all that and the public has become better educated in the standards of good refrigeration, so that now the leading manufacturers are producing cabinets scientifically correct.

Within the last eighteen months there has been a decided trend toward more beautiful and modern kitchens and Mrs. Housewife is now demanding more beautiful refrigerator cabinets. This is in a large measure influenced by kitchenette apartments and small houses where the dining room is replaced by a dining alcove, of which the kitchen is an integral part.

Only yesterday I had a little informal talk with the manager of our apartment house division and I asked him how much electric refrigeration of all makes he estimated was sold to apartment house owners only in the city of New York within the last six weeks. His answer to this question was 'One million dollars.' Just think of that! But the gratifying part is that the surface is only scratched with about 4% of the wired homes now equipped.

It is conservatively estimated that about 80% of all wired homes have electric irons. About 40% have vacuum sweepers and 30% washing machines. Picture in your own minds the big job ahead of us to equip 80% of the wired homes with electric refrigeration.

Now is the time for all of us to put our shoulders to the wheel and to tell our little story to Mrs. Housewife who makes up the 96% of the wired homes still to be equipped.

## Instruction Card with a Reward Connects Buyer Direct with Factory

INSTRUCTIONS FOR THE BETTER CARE OF YOUR **Copeland** REFRIGERATOR

- MOTOR LUBRICATION**—Fill oil cups at each end of motor every six months, using high grade light motor oil.
- FUSES**—Use only the size specified for this unit. Your dealer will gladly tell you the correct size.
- DEFROSTING COOLING TANK**—Turn off electric current at switch, and keep unit out of operation until all frost is melted from tank. This should be done whenever frost becomes 1/2" thick on sides and front of tank. After defrosting, all water in trays should be thrown out and trays, grids, separators rinsed in hot water. Carefully dry out tray doors in tank before replacing trays, filled with fresh, cold water. NEVER use a sharp tool for removing frost or ice from tank.
- REMOVE ICE CUBES**—By turning tray upside down and allowing a stream of water to run on tray, until cubes drop out. Remove cubes from grid in same manner.

SEE OTHER SIDE: A booklet giving 12 recipes for making frozen desserts can be obtained by filling out and mailing the attached Post Card.

POST CARD

COPELAND SALES CO.  
630 Elysee Ave.  
Detroit, Mich.

**Copeland** REFRIGERATOR

**CLEANING**—Wash refrigerator interior with warm water, using a small amount of baking soda. Wipe thoroughly dry, quickly, with clean rag. NEVER use soap or cleaning compounds, as these are injurious to the interior finish.

**CAUTION**—See that refrigerator door is always closed tightly and do not leave open longer than necessary. Food shelves should never be covered with cloth or paper.

**FOOD ARRANGEMENT**

Top shelves—Canned goods, cooked potatoes, cutapples, cantaloupes, fruit, meat, sliced fish, dates, raisins, figs, strawberries, jams and jellies, loaf, ham, butter, oranges.

Lower shelves—Ground meat, cooked meats, fresh fish, dressings, soups, eggs, etc., cold, soups, peas, colds, soups, syrups, cream, Borden's Refrigerator—Apples, apricots, butter, cream, cider, cherries, cheese, radishes, cranberries, fresh meat and fish, fresh berries, milk, water, poultry.

Bottom of shelves—Keep in closed containers. Keep butter, sugar, lard and all other goods in pure form. Get portions of sections should be covered with paper.

NOTE—SHOULD BE KEPT IN TIGHTLY SEALED CONTAINERS.

This Unit Number \_\_\_\_\_ Model \_\_\_\_\_  
(Installed Date) \_\_\_\_\_  
By (Dealer) \_\_\_\_\_  
FOR PROMPT AND EFFICIENT SERVICE Please \_\_\_\_\_

COPELAND SALES CO.  
GENTLEMEN:  
Please send your book of 12 Recipes for frozen Desserts.  
My Copeland is Model \_\_\_\_\_ Number \_\_\_\_\_  
It has been operating since \_\_\_\_\_  
Remarks \_\_\_\_\_  
Name \_\_\_\_\_  
Street No. \_\_\_\_\_  
City \_\_\_\_\_

An ingenious manner of hooking up the factory direct with the ultimate buyer has been worked out by the Copeland Sales Co., Detroit, Mich., by means of its instruction card. Tied up with this is a little reward idea which is said to be working out very satisfactorily.

Describing the plan, A. M. Taylor, manager of advertising and sales promotion, said in a recent article in *Printers' Ink*:

"We worked out the idea of making our return card a part of our instruction card. We also decided to offer the customer-owner a reward for filling out the return card and mailing it to us.

"There is no point about an instruction card more important than 'can't-lose-ability' unless it is indestructibility.

"A brass eyelet at the top of the card enables us to wire one or more to each one of the compressor or condenser units that goes with the Copeland refrigerator.

"We evolved the idea of having a return card made as part of the instruction card for several reasons. One is that it is difficult to get accurate or complete reports from some distributors and dealers on installations. Another reason is to enable owners to communicate with us direct should they wish to. Thus we are hoping to receive expressions of satisfaction as well as any expressions of the other kind.

"There are features about our instruc-

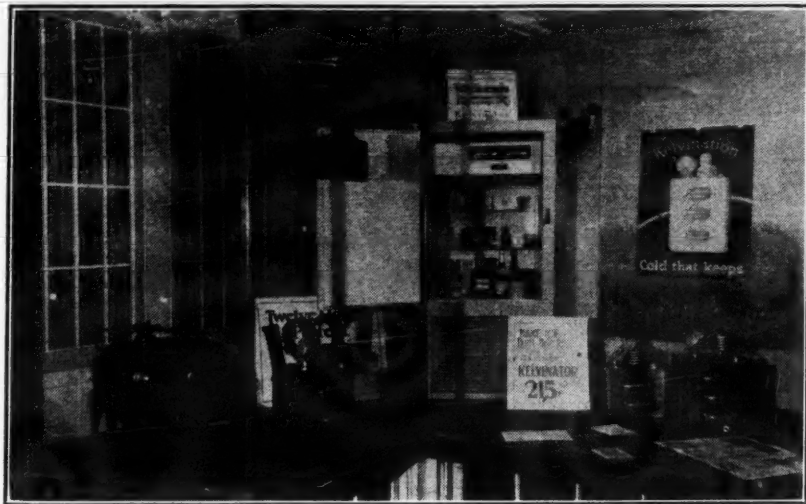
tion card that will interest manufacturers who have a problem of this sort to work out. The first is the reward for filling out the return card. This is a recipe booklet for making frozen desserts. Reference is made on the face side of the instruction card. The customer is expected to insert on the return card the model, the number, the date upon which the refrigerator began operating, his name, street address and city. Upon the 'two blank lines for remarks,' we hope to garner our needs of praise or blame."

## NEW YORK ELECTRICAL AND INDUSTRIAL EXPOSITION

The twenty-first annual electrical and industrial exposition is to be held in the Grand Central Palace, New York City, October 17 to 27 inclusive. It is planned that this show will be the outstanding demonstration of recent developments in the electrical art and related industries.

A departure from the plans of previous years is being made in the coming show in that the first three days, from Wednesday to Friday, inclusive, will be devoted exclusively to attendance by members of the trade. For the remaining seven days, the exposition will be open to the general public as usual.

## Beauty Parlor Girls Get Commissions For Talking Up Electric Refrigeration



Among the unique locations for a display room for electric refrigerators is that of the Burlington-Kelvinator Co., 684 Pine St., Burlington, Wis., whose window display is shown here.

This show room is directly connected with one of the most popular beauty parlors in Burlington, and as Leonard R. Pardee of the Burlington-Kelvinator Co. says, "What better place in the world could there be to demonstrate electric refrigeration to women than right there. While waiting for beauty treatments, they have the opportunity to inspect for them-

selves either an electric refrigerator or an oil burner, both of which are in actual operation in the display room."

The operators in the adjoining beauty parlor have a sort of "gentleman's agreement" with Mr. Pardee whereby they are paid a commission to "talk up" both oil burners and electric refrigerators to their customers.

This location which is the third move this company has made in four years provides both sufficient display space and an unusual opportunity to line up new prospects.

## COPELAND DEALERS APPOINTED RECENTLY

Sixty-four new dealers have just been added by the Copeland Products, Inc., manufacturers of electric refrigeration, Detroit. These include nine in Pennsylvania, nine in Kentucky and seven in New York state. The new dealers are:

Pennsylvania—Martin & Rafferty, 3720 Midvale Ave., Philadelphia; Lee Electric Co., Everett; F. K. Stewart, Rimersburg; A. J. Paulson, 2949 N. Fifth St., Philadelphia; Oliver M. Deibler, Greensburg; William P. Wolf, Duquesne; A. & L. Electric Shop, 1737 W. Columbia Ave., Philadelphia; Mahood & Williams, Butler; Mort Plumbing & Heating Co., 4th St. & Girard Ave., Philadelphia.

Kentucky—S. W. Davis, Mt. Vernon; Hunter Hardware Co., Nicholasville; W. M. Marcum, Manchester; R. E. Cox, London; Albert Hickman, Stearns; Main Street Garage, Somerset; H. L. Moran, Horse Cave; A. P. Perry, Russellville; Duncan Bros., Shelbyville.

New York—J. B. Merrill & Son, Albion; Gordon D. Van Dusen, Lyons; Peter Ewald, 2999 Third Ave., The Bronx; Austin Electric Supply Co., 103 Martins Ave., White Plains; W. M. Coble, Constantia; G. D. Hudson, Oneida; F. S. Nicholson, Port Jervis.

Washington—Standard Furniture Co., Seattle; Tull & Gibbs, Spokane; Van Ausdell-Hoffman Music Co., Spokane; F. M. Haskell Plumbing and Heating, Bellingham; Sam Hill, 3401 E. Cherry St., Seattle.

Ohio—Billie Buck Motor Sales Co., Cincinnati; R. E. Grove Electric Co., Salem; Eclipse Electric Co., Canton; West End Radio, Kentmore.

Illinois—G. C. Tinsword, Lawrenceville; Whitmore, Cassingham & Co., Wilmington.

Alabama—Delta Electric Shop, Anniston; J. D. Comer, Talladega.

North Carolina—New Century Supply Co., Mooresville; Hendersonville Battery Co., Hendersonville.

Wisconsin—G. A. Butter, 603 Mitchell St., Milwaukee; Johnson & Hill Co., Wisconsin Rapids.

Oklahoma—Watts & Ingle, Marshall; Tucker's Auto Service Co., Perry.

Maine—Maine Supply Co., Madison; Portland Copeland Co., Portland.

Louisiana—Maxwell Electric Shop, Minden; Maison Blanche Co., New Orleans.

Florida—Auburndale Hardware Co., Auburndale; Barstow Electric Co., Barstow.

Mississippi—C. Saphie, McComb; E. P. Swain, Jr., Yazoo City.

New Jersey—George R. Hoffman, Rahway; C. G. Pidgeon, Pitman.

Utah—Lindley Hundselman Music Co., Inc., Provo.

Rhode Island—Wakefield Branch Company, Wakefield.

Colorado—Rogers Electric Co., 3134 E. Colfax Ave., Denver.

Arkansas—Hockersmith & Co., El Dorado.

Texas—Texarkana Electric Co., Texarkana.

Ontario—Shillington Hardware Ltd., Blenheim.

Connecticut—George S. Chapman, East Hartford.

California—Wolfe Electric, 3124 S. Pacific St., San Pedro.

Washington, D. C.—Rudolph & West Co.

Massachusetts—Straker's Service Store, No. Attleboro.

Nebraska—Miller & O'Brien, Pilger.

Missouri—Belling Plumbing & Heating Co., 7713 Virginia Ave., St. Louis.

## BUSH CONDENSERS

Made in any size or capacity. Seamless Copper Tubes, Individual Fins, Maximum Efficiency.

BUSH MFG. CO.  
Hartford, Conn.

WHITE-HANNA  
302 Lincoln Bldg.,  
DETROIT, MICHIGAN

## Mineral Wool

assures

Perfect Insulation for

Cold Storage Construction

The low thermal conductivity necessary for maximum insulating efficiency is ideally supplied by this indestructible, vermin-proof and entirely mineral material.

Mineral Wool is rated 6.3 B. T. U. by the U. S. Bureau of Standards and the low cost makes its use a real economy.

Send for sample and descriptive folder.

## U.S. MINERAL WOOL CO.

280 Madison Avenue, New York  
Western Connection: Insulating Products Company, 1553 West Madison St., Chicago

QUALITY SERVICE

**HERRICK**

THE ARISTOCRAT OF REFRIGERATORS

for  
ELECTRIC REFRIGERATION

HERRICK REFRIGERATOR CO.,  
1019 Cedar St. Waterloo, Iowa

## EXTRA DRY ESOTOO THE PUREST SULPHUR DIOXIDE

Analysis Guaranteed

We have an agent, with our product in stock, near you  
Wire us where we can serve you

VIRGINIA SMELTING CO., WEST NORFOLK, VA.  
F. A. EUSTIS, Secretary 131 STATE ST., BOSTON 2 RECTOR ST., NEW YORK

## REFRIGERATION STAMPINGS

We Specialize in the Design and Manufacture of

## ICE CREAM CABINETS

We make them complete or furnish parts separately

Brine Tanks Cooling Units

Unit Supporting Bases and Perforated Metal Covers

METAL HOUSEHOLD REFRIGERATORS Complete OR CAN FURNISH

OUTSIDE STEEL PANELS, INSIDE LININGS, LOUVERED PANELS, LEGS, ETC., SEPARATELY

We Have a Competent Engineering Staff to Help You We Solicit Your Inquiries and Specifications

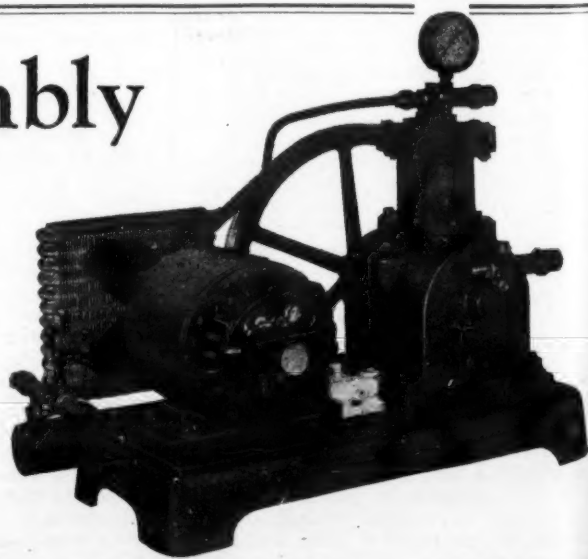
MOTORS METAL MFG. CO. - DETROIT MICHIGAN

## High Side Assembly

We offer the Kulair High Side as the successful result of countless experiments and research work by our engineers in their efforts to perfect a truly balanced combination of compressor, motor, condenser, liquid receiver, fuse block, necessary valves, etc., all mounted on a mechanically designed base that can be installed readily in all of the standard cabinets as well as for remote installations.

Write for Illustrated Folder.

Franklin Air Compressor Corporation  
Norristown, Pa.







Typical "Refrigerator Week" Window Display in a Milwaukee furniture store, showing the type of window cards which were supplied free of charge by the local ice company

## Milwaukee "Refrigerator Week" Induces Pre-Season Buying

Co-operative Campaign by Furniture Dealers and Ice Company Advances and Lengthens Refrigeration Selling Season

By Al. P. Nelson

THE electric refrigeration dealers of Milwaukee have plenty of competition from the manufactured ice man in that city, competition which is very clean and which helps to make the average housewife realize that she should have some type of refrigeration in her home.

The furniture dealers of Milwaukee, in conjunction with the Wisconsin Ice & Coal Co., one of the largest ice and coal companies in this section of the country, have been putting on a Refrigerator Selling Campaign each spring that has sold hundreds of refrigerators in Milwaukee homes long before the hot summer days began.

They have been staging this "Week," from April 26 to May 3 every year. The ice company and the furniture companies have co-operated by installing good window displays which have induced a lot of thought on refrigeration. Furniture men in this city are sold on the idea of the "Week," because it sells hundreds of refrigerators for them two months before the regular refrigerator selling season begins. Naturally when they secure heavy sales at this time it means that their stock is cleared out of the store in short notice and that they can buy again to take care of refrigerator needs for the hot summer season.

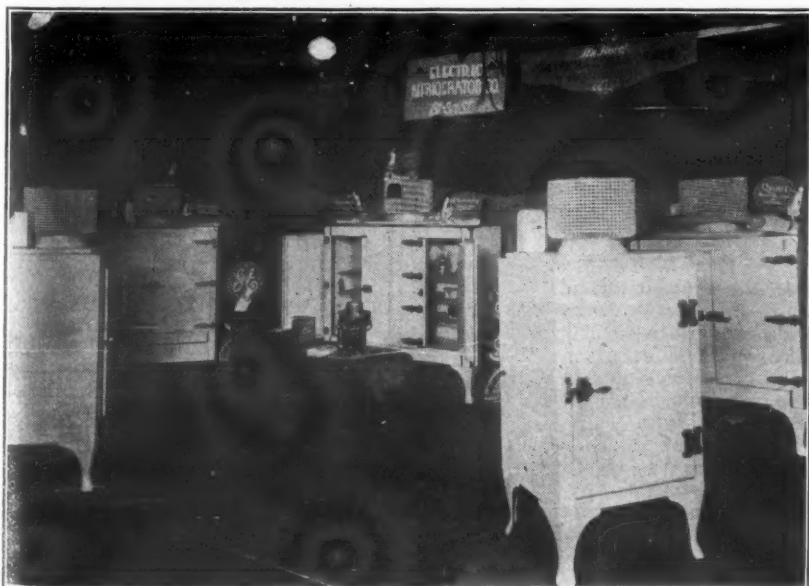
Elaborate displays are put forth by all dealers during the "Week." Columns of publicity in the local newspapers also help to put over the event and create public interest. All signs for the "Week" are printed and distributed by the enterprising ice company. They even go so far as to offer a full week's supply of ice free to

anybody who purchases a refrigerator during this week. This has been an offer which has induced many people to buy refrigerators. Offhand it may seem to be a small offer, but when one stops to consider that perhaps 1,000 refrigerators are sold during the week it can easily be seen that the Wisconsin Ice & Coal Company delivers a lot of ice free.

Men from other cities who have come to Milwaukee to study the sales methods used during the Refrigerator Week campaign say that it is the most successful thing of its kind ever staged. Needless to say, the publicity aroused by the event is also good advertising for all types of refrigeration. The great amount of publicity both for electric refrigeration and the ice refrigeration during the past few years in this territory has resulted very favorably for both.

People have been shown the value of refrigeration with the result that many sales in both fields have been made.

## Public Interest in Electric Refrigeration Demonstrated at Milwaukee Home Show



The display of the Electric Refrigerator Company included many models of General Electric Refrigerators



The Electric Company included both domestic and apartment house units in its display. J. W. Hill, in charge of Kelvinator sales for the company, reports very favorable results

## GAINS INTEREST OF CONTRACTORS WITH CLIPPING SERVICE

Racine Dealer Encloses Trade News Items With Mailings to Architects.

R. R. Braid, secretary-treasurer of the Dales Co., Inc., Racine, Wis., has a merchandising idea in connection with the selling of electric refrigerators which many other dealers should be able to use to good advantage.

With every bit of direct mail that he sends to contractors and architects, he encloses small items of interest to the building trade. This policy and practice has won a great many friends and customers for him and he recommends it to any dealer who is willing to put in the time following the system.

"While I have spent quite a bit of time in doing this thing in the right manner, still I have found that it has paid me very well," said Mr. Braid. "Everything worth while takes time, so a dealer should be willing to spend his time in working on something that actually brings results."

### Clippings Are Appreciated

Mr. Braid says that this sales idea has resulted in many new accounts for him. Contractors have come into the store personally and expressed their appreciation of this service. "Contractors and architects are busy men," said Mr. Braid, "and they do not always have time to thumb through the large trade publications for the small, interesting items they can use in their business. However, when they get a few of these items attached to a letter it is an easy matter to glance over them. Of course, many times I send these men items which they have already read, but I know they appreciate the manner in which they are sent to them. From the comments I am getting from this field, I know that many of the men find the items interesting and put them to use. I am quite familiar with the building trade myself, so I find it quite easy to recognize a valuable bit of information when I see it," he stated.

### Try Selling the Architect and Contractor First

Mr. Braid is putting in a great deal of time sending direct mail to contractors and architects, instead of home owners, because he is getting good results from this type of merchandising. The contractor is the man who builds the home and the architect the man who designs it. If both of these parties can be sold on the idea of electric refrigeration, they are going to specify that it be installed. Consequently, once they are sold on the idea of electric refrigeration they will specify it in all homes and apartments which they erect. It is the new home and new apartment business that the electric refrigeration dealer should attempt to get first, according to Mr. Braid. Once a volume is secured on this type of business, and plans laid for keeping in touch with new projects, a firm can start selling refrigerators to homes that have been erected a number of years. "It is a great deal easier to sell an electric refrigerator to the architect than it is to the home owner," said Mr. Braid, "because the architect and contractor will usually sell the idea to the home owner for you."

The Dales Co. is well known throughout Racine county where it has been selling plumbing fixtures and service to the people there for many years. This reputation, gained through the years, has made the selling of electric refrigerators a great deal easier, because people have confidence in any product that the firm sells. A fine new store has just been erected in Racine which has three display windows facing on two streets. This provides plenty of display space for refrigerators and plumbing supplies. Mr. Braid will feature electric refrigerator displays during the coming year which will be illuminated at night by colored lights.

## Showroom Destroyed by Fire; Business Resumed 3 Days Later

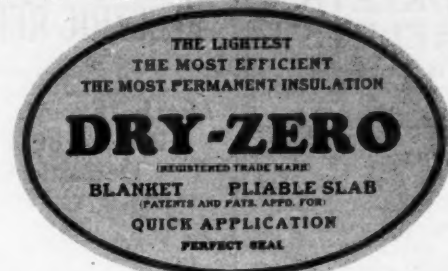
Three days after fire had destroyed the entire building of Charles Rice, Inc., Copeland electric refrigerator dealer, Springfield, Mass., a new showroom, completely stocked, was opened and business resumed. Damage was estimated at \$75,000. V. E. Vining, of the factory sales force, was conducting a sales school in another building when the fire broke out, but the meeting continued in spite of the blaze.

## Appointed Allison Dealers in Dallas

Roger-Meyers Furniture Co. and the Peerless Furniture Co. have been appointed dealers for the Allison electric refrigerator in Dallas, Texas, by the Radio Equipment Co. of Texas, state distributor for the Allison machine.

## Copeland Reports Large Increase in Sales Outlets.

Copeland Sales Company, Detroit, reports that Copeland sales outlets have increased in number from 250 two years ago to over 1500 at present.



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	Conductivity Per Hour
DRY-ZERO.....	24
Hairfelt.....	26
Corkboard.....	30
Pulp Boards.....	33 (LIGHT)

## THESE INSULATION VALUES

This table of conductivities shows comparative efficiencies of the four probably best known materials. Figures are quoted from results of the United States Bureau of Standards tests and other nationally recognized authorities.

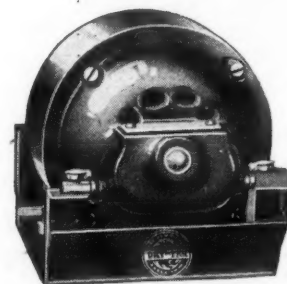
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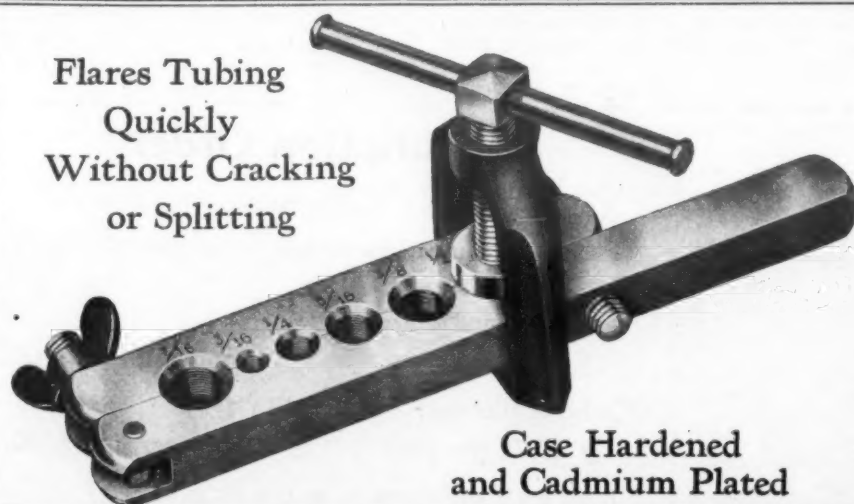
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